



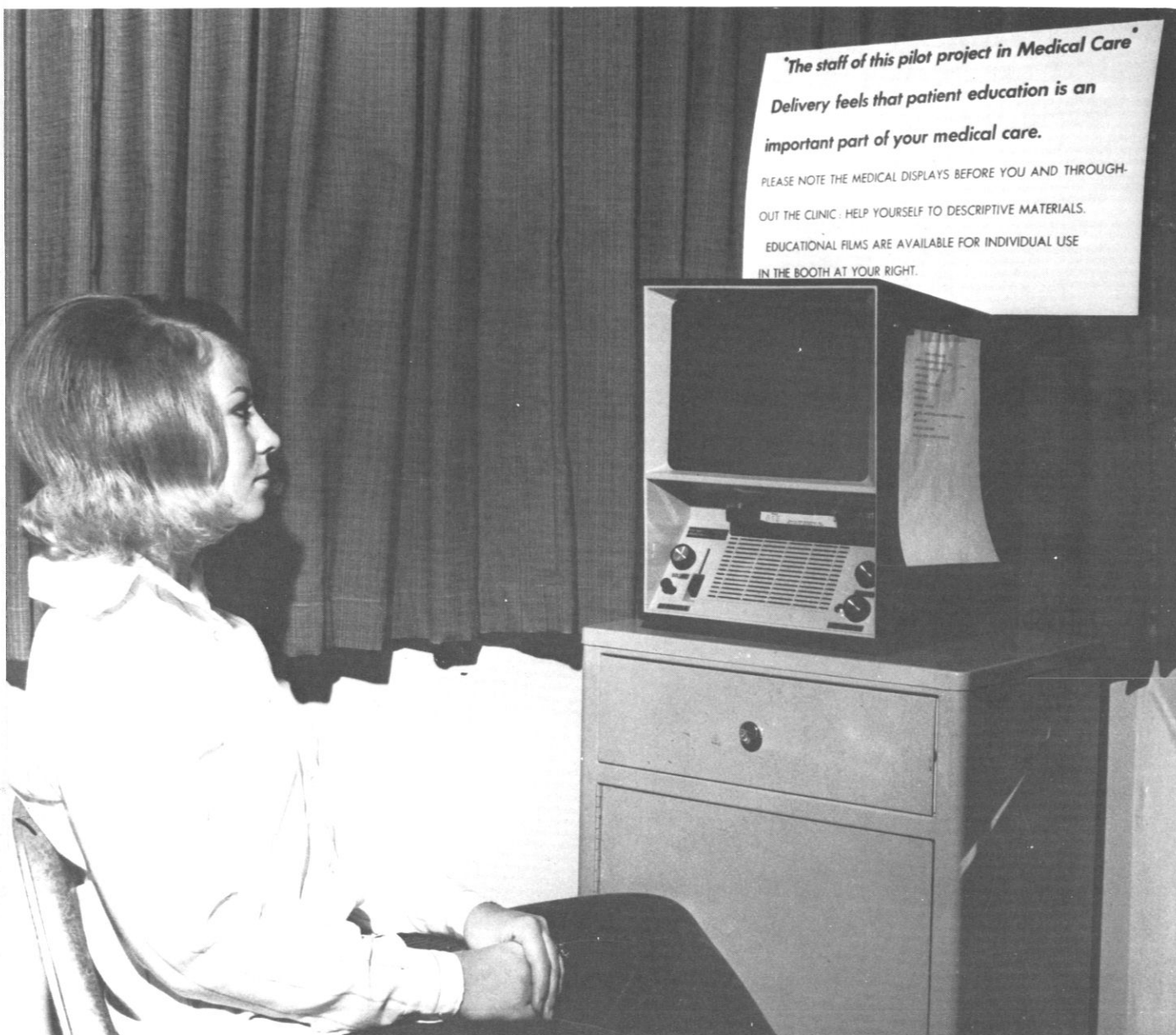
U. S.  
NAVY

# Medicine

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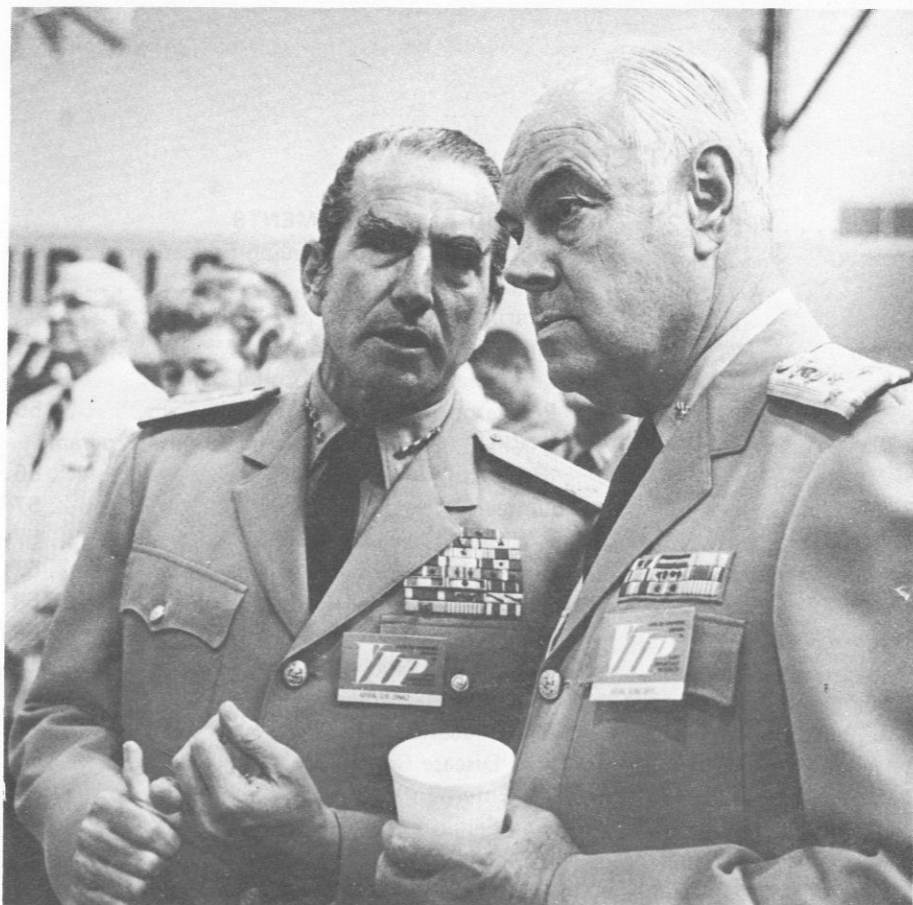
**Credits:** All pictures are Official U.S. Navy Photographs unless otherwise indicated.

Front Cover photograph represents the forward look at improved health care services being taken by the Navy Medical Department. One of the current pilot projects in modernized Medical Care Delivery, in operation at the Dispensary NAS, Brunswick, Maine, was demonstrated at a recent Seminar conducted there, hosted by LCDR Charles Morrison, MC, USNR. See report of the Seminar on page 4.

Page 2 photo reveals a scene captured on film by HM2 Denzel E. Garner at the "Time-Out" Cafe for wounded veteran patients held at the National Naval Medical Center (NNMC) last May. ADMIRAL Elmo Zumwalt, USN, Chief of Naval Operations (left) and VICE ADMIRAL George M. Davis, MC, USN, Surgeon General (right) attended and talked with the V.I.P.'s (Very Important Patients). We are indebted to Mr. John T. Stringer and the Photography Division, Medical Graphic Arts Dept. at the Naval Medical School, NNMC, for preparing and forwarding excellent pictures to us.

Back Cover photo taken on 2 March 1971, shows LTJG Richard Horman (left) "swearing in" classmate Jerry Weiner (right), into the 1915 Program at the University of Miami Medical School, Fla. Both future physicians were sophomore medical students at the time. LTJG Horman is one of the U.S. Navy's first group of 100 medical students selected for the scholarship program which subsidizes medical education.

We wish to acknowledge the continued assistance of the Graphic Arts Section, Code 4542, BUMED.



## from the Chief

Many of our fine young medical officers repeatedly express concern about the trend toward more administrative and less clinical work as they become more senior. This trend definitely exists but it should be accurately interpreted and when compared with civilian medicine, kept in proper perspective. It is virtually impossible today for a physician to avoid some administration in any health care system, civilian or military. In group practice, in academic medicine, in industrial medicine, in preventive medicine, as one becomes more experienced and particularly if one expects to advance in his chosen field he will be expected to do an increasing amount of administration. Even the single private practitioner finds himself required to have knowledge of administrative techniques and policies if he is to stay abreast of his own business and the variety of health insurance and medical programs currently available.

The word administration can often be interchanged with management. It is my firm conviction that many of our health care delivery problems today can be directly or indirectly traced to the fact that too many physicians have failed to apply some of their skills and talents to management. It is equally my conviction that if our profession doesn't do it, others outside of the profession will. Obviously we should employ and utilize every management expert that we can, other than physicians, to guide us in the business administration functions of health care delivery which do not require clinical or professional judgment. However, administrative problems dealing with diet, nursing



service, staffing, equipment, training, records, research and many other operational areas all have professional implications and require some physician's guidance. In short, administration of health care facilities cannot completely adopt the business administration techniques of banks and factories.

Every medical officer, regardless of assignment, who enjoys clinical work should continue to participate in some form of clinical endeavor as long as he feels qualified and is serving a need. Yet it may surprise some to learn that this Bureau receives a significant number of requests from experienced, dedicated, highly trained and well qualified clinicians to be assigned administrative duties, particularly as they become more senior. In a recent survey of those assignments which can be classified as purely administrative, slightly less than 5% of our billets were identified as such. This figure compares quite favorably with that seen in the civilian medical world and is less than that seen in many civilian medical endeavors.

It is quite true that virtually all flag officer assignments are to purely administrative jobs and thus if one is to aspire to this rank one has to be willing to give up, at least temporarily, the clinical practice of medicine. Every effort is being made to obtain several more flag officer billets and assign these to purely clinical jobs, e.g. Special Assistant to the Surgeon General for Surgery, Special Assistant to the Surgeon General for Cardiology, etc. There has been some favorable consideration of this action and it will definitely be pursued.

With the exception of the flag officer assignments mentioned above, and a relatively few command positions at our larger naval hospitals, no assignment in the Medical Corps should require 100% time devoted to administration. Obviously, the amount required depends both on the individual and the billet. I would urge, however, that each medical officer devote the maximum amount of time to clinical requirements when assigned to billets requiring some management supervision. I feel that this attention to patient care requirements will result in not only continuing personal satisfaction, but also in huge dividends for our Medical Corps.

No satisfactory clinician in the Navy will be assigned to a purely administrative job unless he so desires. This must not be construed as a guarantee that he will remain in one area throughout his career and must allow for the possibility of short, infrequent, operational assignments that are vital to the mission of the Navy. Briefly, those who desire to devote their entire career to work within a given specialty and who continue to serve satisfactorily in that capacity, will be so assigned. An official letter to BUMED via your commanding officer is the best way to acquaint this Bureau with your desire to remain in the field of clinical medicine for the foreseeable future.



## SEMINAR ON MEDICAL CARE DELIVERY

*By CAPT Richard L. Bernstine, MC, USN; Head, Clinical Specialties Branch, Research Division, Bureau of Medicine and Surgery, Washington, D.C.*

On 18-19 March 1971, representatives of the Armed Forces, Public Health Service and the civilian community attended a seminar on medical care delivery which was conducted at the Dispensary, Naval Air Station, Brunswick, Me. The faculty of the seminar was headed by LCDR C.C. Morrison, MC, USNR and included among its members: Lawrence L. Weed, M.D., Professor of Medicine, University of Vermont; Loretta Ford, Ph.D., Professor of Community Health Nursing, University of Colorado; J. Kadish, M.D., Acting Chief, Educational Program, Development Branch, Bureau of Health

Manpower Education, NIH; Robert Parks, Ph.D., Executive Vice-President, Technomics Inc.; John Plag, Ph.D., Head of the Preventive Psychiatry Division, Navy Medical Psychiatric Research Unit, San Diego; Mr. Herbert J. Summers, Chief, Data Services, Biometrics Division, Office of Surgeon General USAF; CAPT Ouida Upchurch, NC, USN, Special Assistant for Education and Training, BUMED; CAPT Hugh Pratt, MC, USN, Chief of Medicine, Naval Hospital, Pensacola, Fla.; and LCDR F.X. Faherty, MSC, USN, Assistant Officer-in-Charge, Naval Medical Data Service Center, Bethesda, Md.



Participants in Seminar, standing from left to right: CDR Hugh Pratt, MC, USN, Chief of Medicine, Naval Hospital, Pensacola, Fla.; Dr. Lawrence Weed, Professor of Medicine, University of Vermont School of Medicine; CAPT Robert L. Ohler, MC, USNR, Acting Chief of Staff and Chief of Medical Service, Veterans Administration Hospital, Pocus, Me.; and LCDR Charles Morrison, MC, USNR, Dispensary, Naval Air Station, Brunswick, Me., Host.

## The Problem-Oriented Record

The initial session of the seminar was devoted to the problem-oriented record as developed and utilized by Dr. Weed.

The classic method of obtaining information is source-oriented and does not necessarily identify problems which are evident after taking the patient's history. Dr. Weed has organized the history taking by using a branching type of questioning. The features of history which represent "problems" (abnormal findings, unresolved complaints) are presented as a problem list. Definitive action must then be taken to define, resolve or study these problems further. The progress which flows from the plan of study for each problem is reflected in progress notes. Review of progress notes provides an audit for the care of the patient.

A data base, in addition to the problem list, may contain pertinent laboratory tests and physiologic parameters.

Dr. Weed emphasized that the record should clearly identify: (1) what you are doing for the patient, (2) how you are going to accomplish it, and (3) some means of auditing the record and the accomplishments.

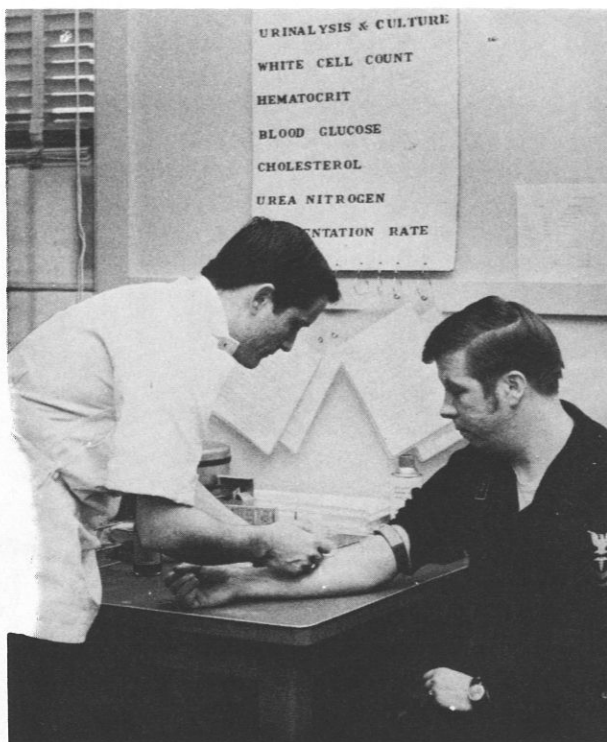
The concept represents a departure from our previous training, but the logic of the system becomes apparent with study as it brings about improvement in health care delivery.

## Implementing the Problem-Oriented Record System

LCDR Morrison, MC, USNR described the implementation of the "Weed" system at NAS, Brunswick, Me., consisting of the following data base:

- (1) Computerized medical history
- (2) Spirometry
- (3) Electrocardiogram with computerized interpretation
- (4) Audiometry
- (5) Tonometry (applanator)
- (6) Visual testing
- (7) Paramedical testing and examinations (TPR, BP, etc.)
- (8) Laboratory profile including:
  - (a) hematocrit
  - (b) sedimentation rate
  - (c) urine dipstick
  - (d) urine culture
  - (e) BUN
  - (f) blood glucose
  - (g) cholesterol
  - (h) triglyceride (visual screen)

Dr. Morrison emphasized the importance of the data base as part of a unifying delivery system, as offered in



HM3 Bruce obtains blood sample for screening laboratory tests as part of the data base.

the problem-oriented concept. His approach has been to define the hazards to the population for specific age groups, and to detect them at a later date. Six hundred records have been established in this manner, to date.

Patient satisfaction has been impressive; 78 percent of patients expressed the opinion that the system represented a great improvement in medical care delivery. Forty percent of the records identified problems which, it is believed, would have been missed in source-oriented records.

Dr. Ohler discussed his experiences with the problem-oriented record at the Veterans Administration Hospital, Tagus, Me. He noted a decrease in chart size, once the system is instituted, and a significant saving in physician time. He stated that the system is currently under review by the Veterans Administration, Washington, D.C. for implementation in all facilities.

COL Robert North briefly presented his experience at Brooke Army Hospital. A questionnaire answered by his staff showed that there was marked improvement in the records and improvement in teaching rounds due to the use of the problem-oriented record. The main disadvantage was the time required to learn the new system by the medical officers.





Physiologic testing is conducted as part of data base. Patient is undergoing audiometric examination, to be followed by tonometry.

Dr. Weed commented on the presentations emphasizing that the system must be learned to be properly used. Leadership and firmness are essential if the system is to be correctly initiated. The system should be understood and put to active use prior to the addition of automation.

#### Advantages of the "Weed" System

A demonstration of the system as currently practiced at NAS Brunswick was provided. Dr. Morrison summarized this portion of the meeting by quoting a recent editorial\* which offers ten reasons why Dr. Weed's medical-record system merits enthusiastic physician acceptance:

(1) Promotes logical approach to a patient by all physicians

(2) increases record efficiency by use of display system for clinical data

(3) enhances communication between physician and other members of the health-care team

(4) furthers the education and learning process of health personnel

(5) educates physicians in computer system

(6) increases quality of medical care provided by group practice

(7) encourages accurate clinical research efforts

(8) eliminates need for lectures on ward rounds and promotes direct assessment of patient status

(9) provides an orderly functional approach to patient evaluation and care with elimination of irrelevant medical data, and

(10) leads to better patient care as a final result of the foregoing.

In the latter editorial, J. Willis Hurst, M.D. points out that Weed's system of numbering immediately

\*Hurst, J.W., Ten Reasons Why Lawrence Weed is Right, New Eng J Med 284:51, 1971.



equates specific problems with the respective treatment programs, official orders, clinical progress and therapeutic outcome. This organized information is automatically developed in all medical records in a uniform and uncomplicated manner. Good medical records constitute teaching documents and instruments of learning, Dr. Hurst affirms, and lead patients to better medical care.

### Application of Automated Systems

The second session examined the uses of automated systems in Health Care Delivery.

LCDR Francis X. Faherty, MSC, USN was moderator of this discussion. He presented an overview of the present use of computers in Navy medical facilities. He reviewed the current and planned status of data processing systems in the Navy Medical Information System. Future plans include possible application of the automated clinical laboratory, computer analysis of the electrocardiogram and electroencephalogram and on-line patient monitoring.

Mr. Herbert J. Summers of Data Services Biometrics Division, Office of the Surgeon General, USAF, reviewed the status of computers in the medical facilities of the Air Force. A central control of all computers and associated equipment and personnel exists in the Air Force. Primary use of the equipment, at this time, is focused on collection of data and production of reports.

CAPT Timothy Doyle, MC, USA of the Army Medical Research and Development Command presented an overview of the Army activities in this area. Active projects include implementation of the patient-oriented history at one facility, automation of nursing notes from the Neuropsychiatry Service, automation of physician notes from burn research studies, and development of a medical instrumentation linkage system for laboratory studies at William Beaumont Hospital in El Paso.

Dr. John Plag discussed the work of the Navy Medical Neuropsychiatric Research Unit at San Diego, establishing predicative profiles of psychiatric patients from computerized histories. In addition, Dr. Plag presented the criteria for determining the future effectiveness of a recruit. The basis of the system depends on a weighed appraisal of the following information: AFQT score; schooling (years); number of expulsions or suspensions from school; number of arrests (excluding automobile violations); family stability.

MAJ R. Bickel, MC, USAF presented the study of the automated medical examination system (AMES). The planning phase is completed and although it has

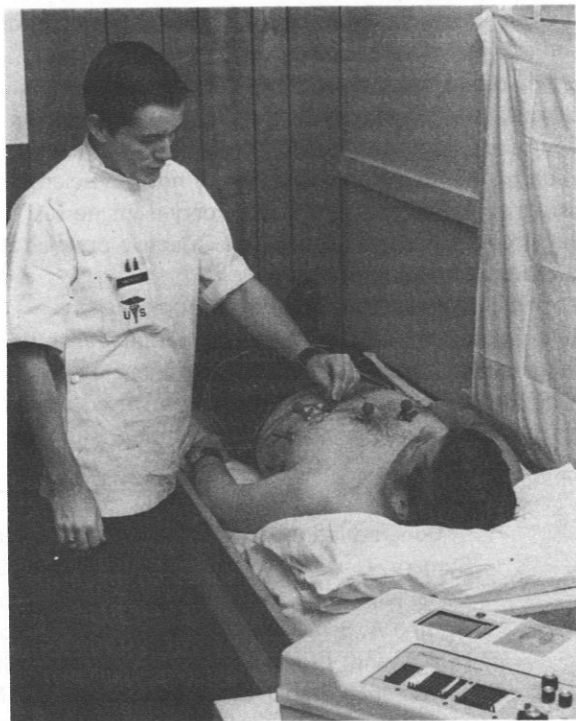
not been implemented, anticipated benefits include the following:

- (1) Improved physical examination techniques
- (2) Improved medical information transmittal
- (3) Functional presentation of information to the physician
- (4) Functional entry of physician's information
- (5) Creation of a data repository, and
- (6) Quality control for audit.

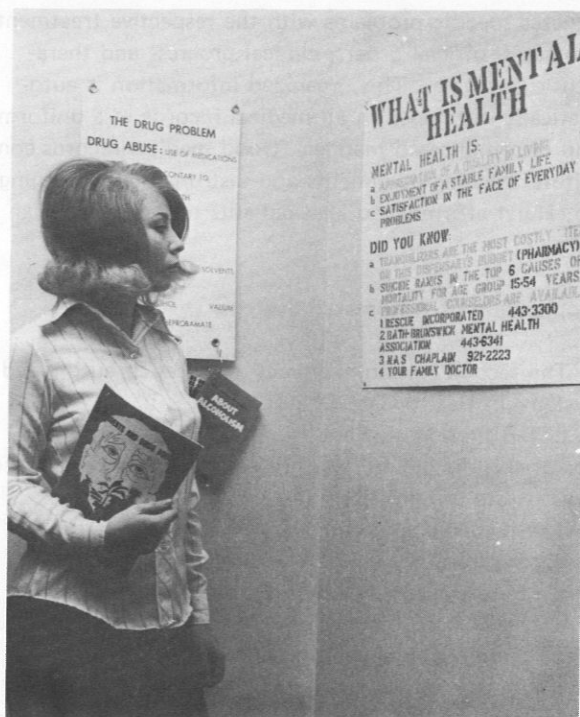
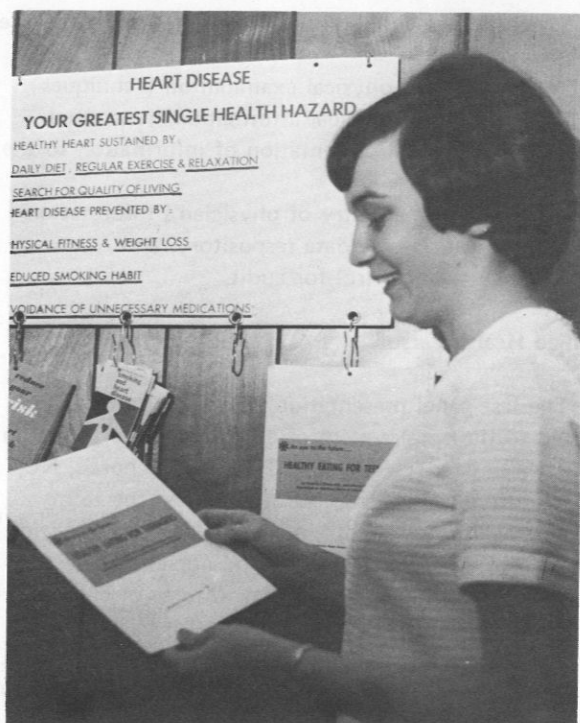
### Allied Health Personnel

The last panel presentation and discussion was devoted to the employment of allied health personnel in the health care system. CAPT Ouida Upchurch, NC, USN introduced the subject and defined the term "allied health personnel" in the context of current discussion to include technicians and nurses.

Dr. Joseph Kadish, National Institutes of Health, reviewed the whole range of allied health training programs from current programs in the military to four-year college studies leading to a degree. The situation is fluid and curriculum experimentation active. By 1980, the health industry will be the largest as judged by the number of employees. Critical expansion of present training programs is essential to meet these needs.



HM3 Bruce positions leads for electrocardiogram with cassette recording system for automated analysis.



Dependent patients are invited to take home available instructional medical material.

Dr. Loretta Ford, Professor of Nursing at the University of Colorado, discussed the current pediatric practitioner nurse project. The primary purpose of this program is to train nurses (who possess a baccalaureate degree) to: (1) do a physical examination, (2) assess the health of the sick child, and (3) respond to emergency health conditions. The nurses, following completion of the four-month course, are not physician's assistants but act independently. Forty-eight nurses have entered the course and 33 are in active practice at this time.

Dr. Robert Parks, Technomics Corporation, presented preliminary details of the occupational analysis being conducted for the Medical Department of the Navy. The initial portion of the study involved a system survey and career analysis. A definition and

inventory of tasks performed by corpsmen was prepared. Subsequent activity has been directed to preparing a frequency job description. Tasks were identified as being specific to certain occupations or groups of occupations, or general to all corpsmen. The review will permit modification in training as well as more efficient grouping of corpsmen's technical activities.

### Conclusion

Dr. Morrison summarized the findings presented at the meeting and expressed the view shared by all that a highly successful forum had taken place. The confrontation had established necessary lines of communication between the several disciplines which will move into this area in the future. ☸

Congratulations to CAPT Frederick E. Jackson, MC, USN; Chief, Dept. of Neurological Surgery, Naval Hospital Camp Pendleton, Calif., who recently published his 100th professional paper in a prestigious journal. Authorship of the article was shared with LCDR Adolph A. Schonder, MC, USNR; LCDR Robert C. Cook, DC, USN; LTJG John R. Wilcox, USNR, and; LCDR Robert H. Whitely, MSC, USNR (Ret). The article, "Transorbital, Transcranial Stab Wound," appeared in JAMA 215:10, pp 1649-1651, March 8, 1971, and is well worth reading. The artist's drawing is excellent. ☸

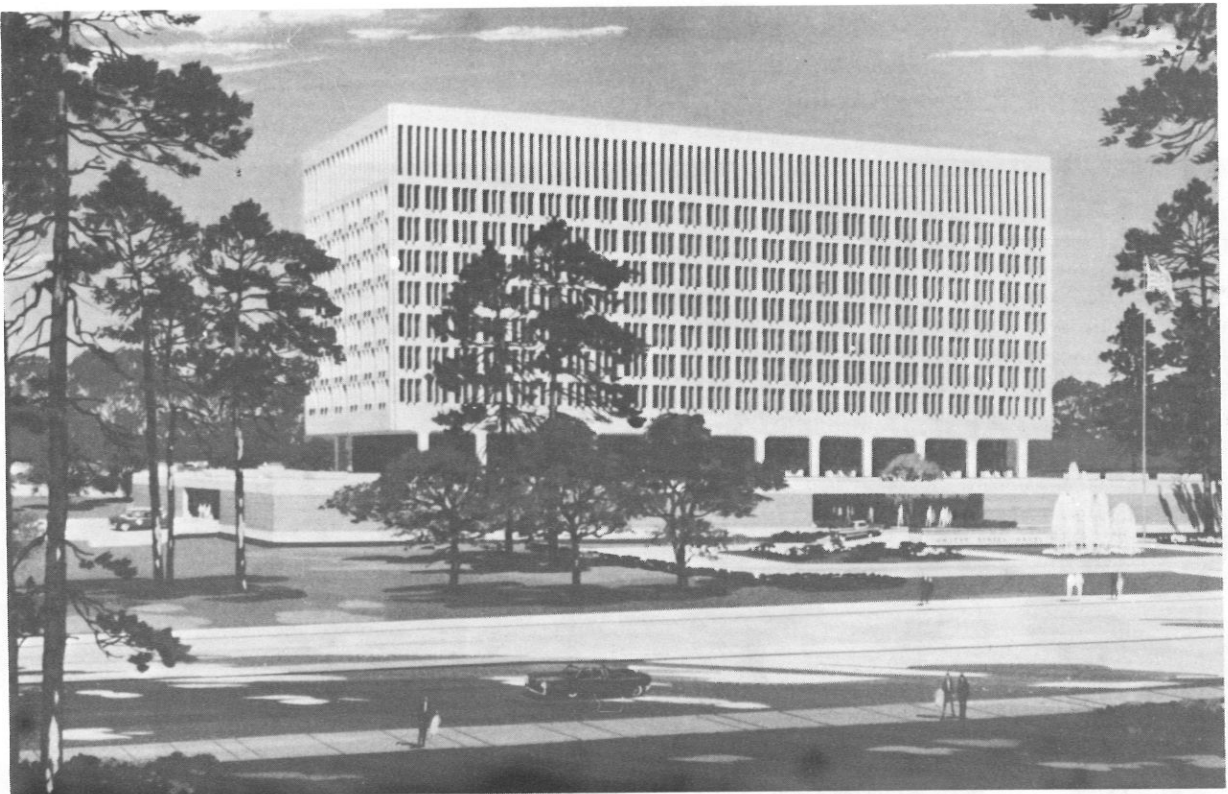
## NAVY MEDICAL CONSTRUCTION PROGRAM

*By CDR Lloyd B. Nichols, MSC, USN; Head, Shore Installations Branch, Planning Division, (Code 412), Bureau of Medicine and Surgery, Washington, D.C.*

Through the years, Navy Medical Department personnel in some areas, have been tolerating less than desirable and functionally inadequate facilities in which they must work and treat their patients. BUMED has been well aware of the need for new hospital dispensaries/dental clinics; a concerted effort has long been made to improve the situation. If positive results seemed slow in coming, it is pertinent to consider the intricate procedures required to bring construction aspirations to full fruition.

Unlike other Military Construction (MCON) projects, medical facilities are subject to numerous and lengthy reviews which BUMED must propel through the

Department of the Navy and the Department of Defense (DOD); this requires about two years' additional planning. From its inception, each project must first be reviewed by a board convened by the Assistant Secretary of Defense (Health and Environment), ASD (H&E). Following this approval, concept drawings are made by the Naval Facilities Engineering Command Headquarters (NAVFACENGCOM), in conjunction with BUMED, and reviewed by the Assistant Secretary of Defense (Installations and Logistics), [ASD(I&L)]. Following approval of the concept drawings by ASD(I&L), the project must be presented by BUMED to the Navy Military Construction Review Board (NMCRB) where



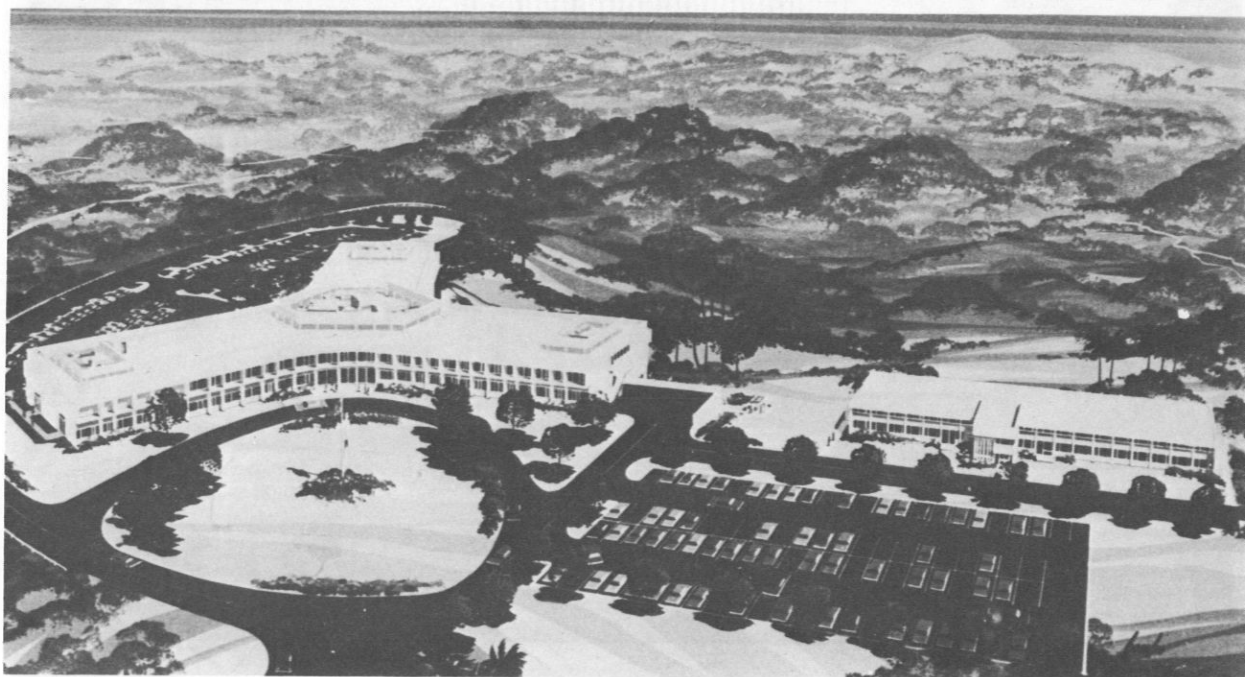
Naval Hospital Charleston, S. C.  
500 Beds \$15,000,000  
Occupancy May 1972

The plaza and fountain in the foreground have been designated as the "L. Mendel Rivers' Memorial Plaza."





Naval Hospital Memphis, Tenn.  
230 Beds \$6,500,000  
Occupancy January 1972



U.S. Naval Hospital Roosevelt Roads, P.R.  
120 Beds \$7,600,000  
Occupancy August 1972



it competes with other MCON projects within the Navy. Once approved by the NMCRB, final working drawings are authorized by NAVFACENGCOM which are subject to review by ASD(I&L) at the 30 percent stage. While the final working drawings are being prepared and reviewed, the project itself is again reviewed on the way up through the DOD and into Congress. Once in Congress, each project is reviewed by the authorization committees of the House and Senate as well as the appropriations committees of the House and Senate. Following authorization of the project by Congress, and appropriation of the money, the project must be advertised for competitive bidding and subsequent award to the low qualified bidder.

There have been two major problems encountered in the medical construction program: (1) a lack of funds in the MCON program, and (2) sharp increases in construction costs. Nevertheless, the dire need for new medical construction has been recognized by the Chief of Naval Operations and the Secretary of the Navy; funds in the amount of \$30-40,000,000 annually (in contrast to an average of 12,000,000 annually for the past 10 years) will be earmarked over the future years for medical construction. The photographs presented

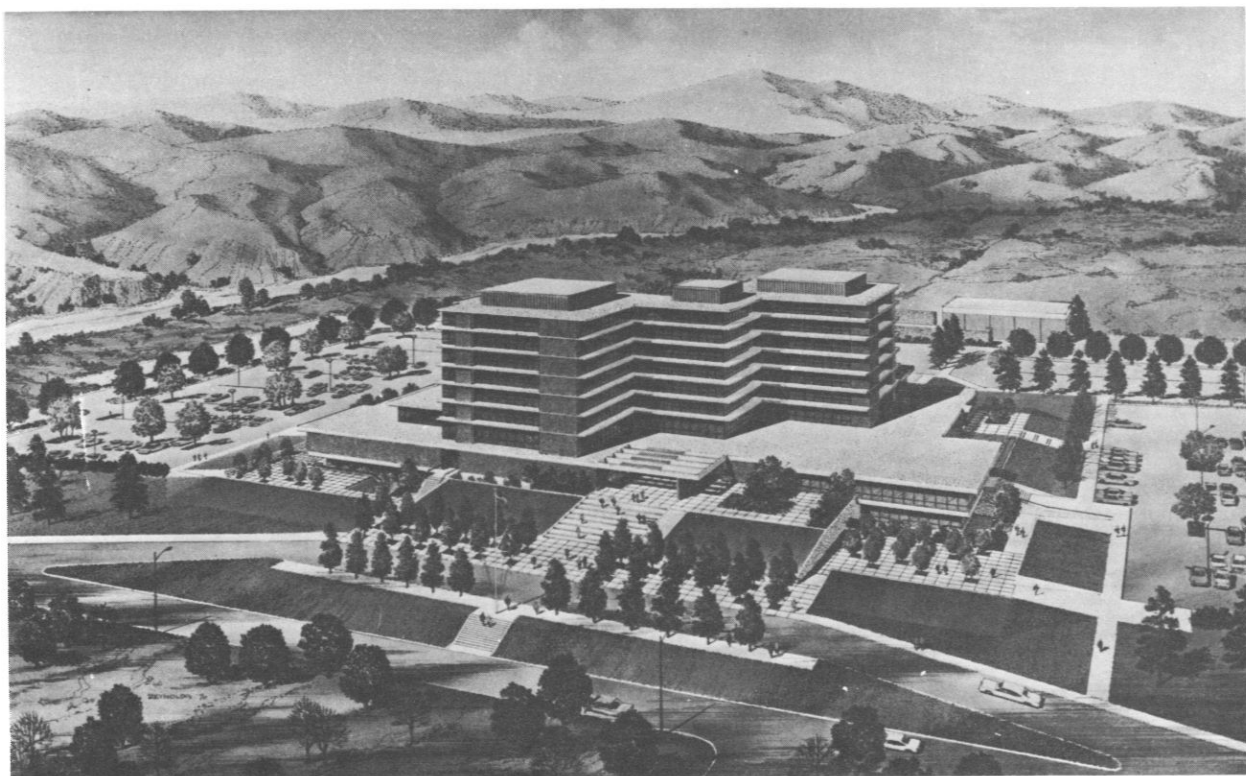
here attest to the success of our program. Facilities approximating \$95,000,000 are currently under construction.

In addition to the hospitals represented pictorially, several new dispensaries and/or dental clinics are under construction at the following locations:

Marine Corps Base, Camp Lejeune, N.C.  
 Naval Amphibious Base, Little Creek, Va.  
 Marine Corps Air Station, Yuma, N.M.  
 Marine Corps Base, Camp Pendleton, Calif.  
 Naval Security Group Activity, Winter Harbor, Me.  
 Naval Dental Clinic, Camp Pendleton, Calif.  
 Naval Dental Clinic, Pearl Harbor, Hawaii  
 Naval Dental Clinic, Long Beach, Calif.

Additionally noteworthy are:

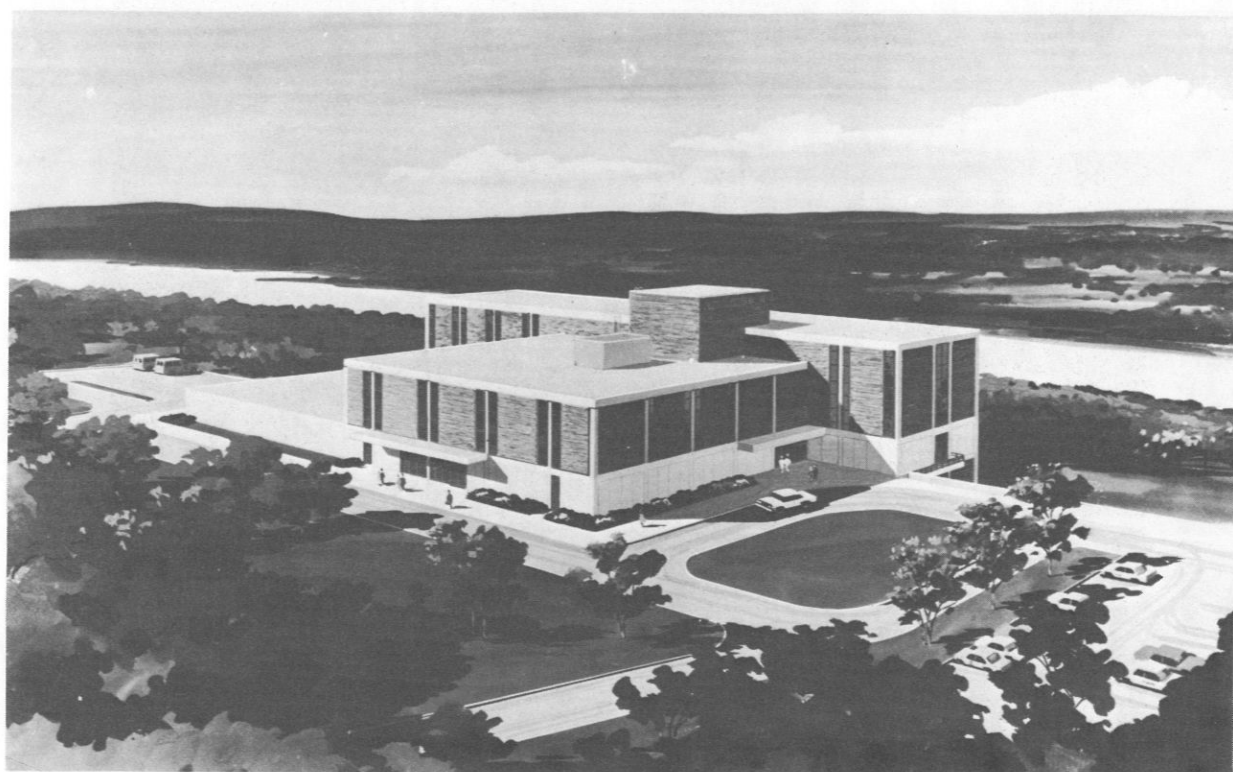
A 25-bed hospital at Naval Air Station, Keflavic, Iceland.  
 Air conditioning of hospitals at:  
 Bethesda, NMMC, Md.  
 Guam, M.I.  
 Yokosuka, Japan.



Naval Hospital Camp Pendleton, Calif.  
 600 Beds \$21,000,000  
 Occupancy December 1973



Naval Hospital Corpus Christi, Tex.  
195 Beds \$10,000,000  
Occupancy April 1973



Naval Submarine Medical Center New London, Groton, Conn.  
125 Beds \$9,000,000  
Occupancy April 1973

Included in the FY-72 MCON program now before Congress are:

A \$15,000,000, 220-bed addition to the Naval Hospital, Long Beach, Calif.

Dispensaries

Naval Amphibious Base, Coronado, Calif.

Naval Air Station, Glynnco, Ga.

Naval Weapons Station, Yorktown, Va.

Dental Clinics

Marine Corps Recruiting Depot, San Diego, Calif.

Marine Corps Recruiting Depot, Parris Island, S.C.

A \$3,160,000 replacement for the Naval Hospital Corps School at Great Lakes, Ill.

The hospitals presently under construction range in size from a 120-bed hospital in Roosevelt Roads, P.R., to a 600-bed hospital at Camp Pendleton, Calif. Major design advances have been made within all of these hospitals in the one-, two-, and four-bed rooms in the nursing units as opposed to the old open bay wards.

The Naval Hospital Camp Pendleton will be the first of the new naval hospitals to have toilet and shower

facilities in each bedroom. The new Naval Hospital in Charleston will be the first to contain laminar flow air conditioning in the surgical suite. The hospitals are as fully automated as is practical and reflect many of the recommendations resulting from DOD research study "New Generation, Military Hospital." All the hospitals will be completely air conditioned and those in the warmer climates will have air conditioning in the food preparation areas. The latter refinement represents one advance initiated by BUMED and approved by DOD in an effort to provide a cleaner, more comfortable working area for the preparation of hospital diets.

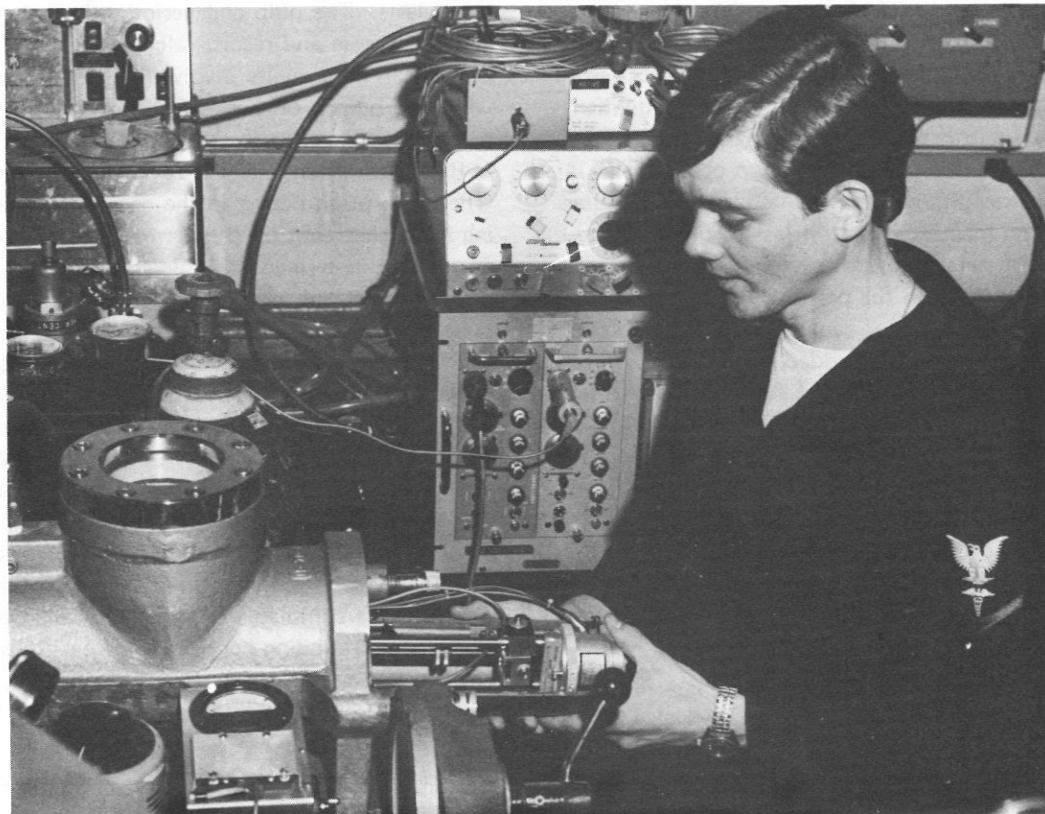
As an ongoing program, plans for the immediate future (FY 1973-74) include new hospitals at:

Pensacola, Fla.

Port Hueneme, Calif.

Orlando, Fla.

In the same time frame, approximately 15 dispensary/dental clinic replacements will be included in this program averaging \$30-40,000,000 per year. Even at this accelerated rate of correction, it will take approximately eight years to correct our most serious deficiencies. But at long last, we are clearly on the way. 🇺🇸



HM3 William L. Fink is shown introducing an insert into a Hyperbaric Chamber prior to pressurization. This instrumentation is utilized in the study of the effects of marine toxins upon neuromuscular tissue in laboratory animals exposed to hyperbaric environments.—PAO, NNMCMC, Bethesda, Md. 🇺🇸



## A COMPOSITE VIEW OF TOOTH RESORPTION\*

By LT Jerry K. Johnson, DC, USN; Dental Department,  
U.S. Naval Station, Rota, Spain.

From dentistry's inception, the practitioner has been profoundly concerned with the loss of the calcified portions of the teeth. The dentist has been predominantly occupied with controlling and repairing tooth loss caused by the caries process. As the dentist gains greater understanding and control of the caries process, he directs attention toward other processes that destroy the tooth's calcified components. Of these other processes, one major cause of tooth destruction is that of resorption of the calcified tissues.

While the complete etiology of resorption is unknown, many facts have been elucidated. The first note of root resorption in literature was introduced in 1856 by Bates. Since that time, many researchers have studied root resorption and have advanced many theories about the nature of root resorption.

Loss of the hard tissues of the teeth, when not in conjunction with caries or fracture, is known as resorption. Any portion of a tooth may be resorbed when its surfaces are in contact with other living tissue. Depending upon where this phenomenon occurs, it is known either as internal or external resorption. Internal resorption manifests itself in loss of dental tissue from the root canal outward; whereas, external resorption manifests itself on the periphery of the root and progresses toward the root canal. Enamel is resorbed only when the tooth is embedded or impacted.

The calcified dental tissues are formed in a two-step process. Initially, the organic matrix is formed and inorganic salts are deposited on it. When resorption occurs, it is a one-step process removing the matrix and salts simultaneously.<sup>1</sup> Stoman and others agree that the resorption of hard dental tissues is the result of osteoclastic activity, as in bone resorption, only its progress is at a slower rate. Multinucleated osteoclasts

are found in Howship's lacunae in actively resorbing areas.<sup>2</sup> While some authors refer to these giant cells as odontoclasts or cementoclasts, Kronfeld feels that this is unwarranted because these resorptive cells are similar to those found in bony resorption.<sup>3</sup> These osteoclasts produce enzymes that dissolve the organic constituents; accumulating agents remove the insoluble salts. More recent studies have shown that although osteoclasts are usually present during resorption, resorption has occurred in their absence.<sup>4</sup>

The exact origin of these osteoclasts remains an unsettled issue. Kronfeld lists two possible sources: the capillaries of the connective tissue adjacent to the hard dental tissue, or by the transformation of connective tissue cells or undifferentiated mesenchyme cells to osteoclasts. The pulp and periodontium also have the ability to form and resorb calcified tissues. The periodontium is continually involved in both processes, while the pulp is only involved in resorption after a metamorphosis occurs within the pulp.<sup>5</sup>

Root resorption is classified in many different ways. When resorption occurs in the deciduous dentition during its replacement by the permanent dentition, it is normal and is termed physiologic resorption. When the resorption process affects the permanent dentition, it is termed pathological root resorption.

Of the two major divisions of root resorption, physiologic and pathologic, physiologic is least understood. Although physiological root resorption occurs in nearly every individual, its complete etiology still awaits the researcher. At approximately four years of age, the developing tooth germs initiate resorption of the primary roots. The growing and erupting permanent tooth bud exerts pressure upon the deciduous root. This pressure stimulates the formation of osteoclasts from the surrounding connective tissue. It is the pressure exerted by the succedaneous tooth bud, not an inherent factor in the bud, that initiates the formation

\*LT Johnson's comprehensive report on the present state of knowledge concerning tooth resorption was completed during his internship at Naval Hospital, Philadelphia, Pa., under CAPT Homer S. Samuels, DC, USN. We are pleased to reproduce this interesting paper.

The opinions expressed herein are those of the author and are not to be construed as official or reflecting the views of the Navy Department or of the naval service at large.

<sup>1</sup>Kronfeld, *Histopathology of the Teeth*.

<sup>2</sup>D.W. Stoman, *Oral Health*, pp. 511-512.

<sup>3</sup>Kronfeld, *Histopathology of the Teeth*, p. 274.

<sup>4</sup>Graber, *Orthodontics Principles and Practice*, p. 406.

<sup>5</sup>Kurt H. Thoma and Hamilton B.G. Robinson, *Oral and Dental Diagnosis*, p. 287.



of osteoclasts. The bud is protected from resorption by its enamel epithelium.<sup>6</sup> Orband's investigation revealed an occlusal movement of the developing tooth bud rather than the production of upward pressure due to root development. This occlusal movement maintains the necessary pressure for resorption upon the primary tooth. Oppenheimer and Tomes both revealed that this eruptive movement is not continuous. It consists of periods of resorption followed by periods of redeposition of the alveolar bone and primary root. This explains how primary teeth may be loose at times and then later firm up.<sup>7</sup> These periods of resorption and calcification may result in ankylosis of the deciduous tooth. The pulp tissue is inactive in this resorptive process until the very late stages before exfoliation. Infected teeth may resist this resorption. Although this seems like the complete answer to the nature of physiologic resorption, the resorption process may also occur without a succedaneous tooth being present. Primary teeth may also produce a bone fenestration in the labial alveolar bone with root resorption in the fenestration area. This abnormal resorption of bone and root appears to be related to a disturbance in the process of physiological resorption.<sup>8</sup> The complete etiology of physiologic resorption is, as previously stated, unknown.

Whereas physiological resorption is mainly external, pathological resorption is concerned to a greater degree with both external and internal resorption. True internal resorption occurs only in those cases where the resorption initiates itself in the pulp chamber. Many cases are diagnosed as internal resorption when, in fact, they represent cases of external resorption starting from an undetected area on the periodontal surface of the root.<sup>9</sup>

The differentiation of the two resorptive processes by radiographic study is quite difficult. Most often the resorption will be of an external type that mimics internal resorption. External resorption is characterized on the roentgenogram by asymmetrical and irregular resorption, which produces radiolucent areas with sharply scalloped margins. The contour of the intact pulp canal is usually visible on the radiogram.<sup>10</sup> True internal resorption starts within the pulp chamber and usually progresses by uniform enlargement of the pulp chamber. The radiograph reveals a sharp, clearly

defined symmetrical widening of the root canal.<sup>11</sup> Another aid in diagnosis is the use of multiple radiographs obtained from different angles. While this criterion does not hold up in every case, its usage will generally help in establishing a differential diagnosis for the resorption process.

While the exact origin of the osteoclasts, be it undifferentiated mesenchymal cells or metaplasia of the pulp, is unknown, many different types of stimulus may provoke their appearance. A wide range of stimuli from inflammation to toxic substances has been held responsible for initiating the resorptive process. A factor often coinciding with resorption is trauma; trauma produces pulpal hemorrhage. The resulting hematoma is infiltrated, organized, and replaced by granulation tissue. This granulation tissue proliferates and thereby halts secondary dentin formation. Osteoclasts become evident histologically, showing lacunae resorption.

Internal resorption in the crown of a tooth may progress to the extent that the vascular pulp tissue may be seen through the enamel and, thus, is referred to as "pink tooth." Internal resorption may be progressive and lead to perforation or fracture of the tooth. In some cases there may be spontaneous regression with the resorbed areas recalcifying. The most effective treatment in internal resorption is root canal therapy unless the tooth is perforated. Extraction is the treatment of choice when the tooth is perforated.

Removal of the cause of resorption leads to disappearance of the osteoclasts and the formation of an irregular hard substance in which odontoblasts soon appear. Odontoblastic protoplasmic processes are incorporated in the newly calcified tissue, thus characterizing it as dentin.<sup>12</sup>

External resorption is the most common form of root resorption. In a recent study it was reported that 82 percent of men's and 91 percent of women's teeth showed some evidence of resorption.<sup>13</sup> Some of the numerous causes of external resorption<sup>14</sup> are:

- a. trauma,
- b. sequel to orthodontics when large forces are employed,
- c. infectious processes,
- d. aftermath of reimplantation or transplantation,

<sup>6</sup>Kronfeld, *Histopathology of the Teeth*, p. 275.

<sup>7</sup>*Ibid.*, p. 278.

<sup>8</sup>Otto R. Menendez, *Oral Surgery, Oral Medicine and Oral Pathology*, pp. 654-658.

<sup>9</sup>Sommer, Ostranader, McCrowley, *Clinical Endodontics*, p. 447.

<sup>10</sup>F.H. Lepp, *OS, OM, OP*, p. 184, 27(2), Feb 1969.

<sup>11</sup>*Ibid.*, p. 185.

<sup>12</sup>*Journal of the American Dental Association*, Vol. 34, p. 43, 1947.

<sup>13</sup>W.M. Schafer, M.K. Hine, B.M. Levy, *A Textbook of Oral Pathology*.

<sup>14</sup>D.W. Stoman, *Oral Health*, p. 123, July 1964.

- e. pressure of an impacted tooth against another tooth,
- f. cyst or tumor, and
- g. idiopathic — true cause unknown.

Root resorption is most common in the apical one-third of the root, and this apical resorption manifests itself in two forms:

(1) Smooth resorption which is usually associated with trauma or orthodontic therapy. The root is shortened and blunted with a smooth surface and vital pulp.

(2) Rough resorption is associated with infection. The root has a roughened surface at its periphery and is often nonvital.

There are many types of trauma including traumatic occlusion,<sup>15</sup> occlusal overload due to fixed prosthetics, and faultily constructed removable prosthetic appliances that may cause external resorption.<sup>16</sup> Marshall noted that when the diet is deficient in fat soluble vitamins, the incidence of overload resorption is increased.<sup>17</sup>

Some investigators believe that there is a relationship between blood supply and external resorption. Hyperemia in the periodontal ligament produces pressure on the root; resorptive processes often result.<sup>18</sup> In external resorption, the osteoclasts are derived from the periodontal ligament. Often there is resorption and apposition occurring simultaneously whereby dental tissue is transformed into osseous tissue.

Occlusal and mechanical forces are usually incurred during orthodontic treatment. Although most orthodontic movement causes root resorption, the greater resistance of cementum to resorption, as compared with bone, allows the practice of orthodontia. The extent of reported orthodontically-incurred resorption varies greatly in dental literature. One article reports 12 percent occurrence<sup>19</sup> while another article reports 92.6 percent incidence with an average loss of 8.3 percent per incisor.<sup>20</sup> Often teeth are actually devitalized during orthodontic procedures.

Infectious processes destroy the vitality of the cementum by destroying the metabolism of the cemental corpuscles. The necrotic cementum resembles a foreign body which is eliminated by resorption. The resorption is gradual, without sequestration as is found

in bone resorption. A periapical granuloma may cause resorption in some cases, while in others no resorption occurs. Since resorption occurs readily in vascular areas, it is surprising that more teeth with periapical granulomas do not exhibit resorption.

Root resorption is also seen in connection with progressive bone condensation.<sup>21</sup> Repair will follow removal of the irritant only if the periodontal membrane has not been destroyed. A reimplanted or transplanted tooth is partially analogous to a bone graft, serving as a temporary support that is later resorbed. A portion of the tooth is resorbed and replaced by bone, causing an ankylosis between the remainder of the root and the bone.

Impacted teeth which are so positioned may cause resorption of adjacent teeth. The impacted tooth exerts pressure against the roots of the adjacent tooth causing the differentiation of osteoclasts which resorb the tooth.<sup>22</sup> It is interesting and strange to note that the maxillary cuspid undergoes resorption more frequently than any other tooth, although third molars are most frequently impacted.<sup>23</sup> Tumors and cysts may produce resorption due to the pressure they exert. The connective tissue surrounding them fathers the osteoclast. Tooth displacement is more common than resorption, however, with cysts and benign tumors.

Root resection is the treatment of choice for roots with excessive apical resorption. Where resection is contraindicated, Grossman advocates a technique of extraction, resection, and reimplantation. Current extensive research in implantation, reimplantation and transplantation of teeth provides the best source of information on resorption. Most reimplanted or transplanted teeth display some degree of resorption. While autogenous transplanting of partially developed teeth is clinically useful, transplantation of fully developed teeth usually fails due to resorption.<sup>24</sup> Comparison between reimplantation of mature and immature teeth has revealed that the mature teeth have a higher incidence of apical and cervical resorption. The exact reason for this resorption is not known, but many theories have been postulated. One prominent concept holds that the traumatic removal of the periodontal membrane causes postoperative resorption.

Luke and Boyne used osseous-dental transplants in

<sup>15</sup>Fred C. Bergamo, OS, OM, OP, p. 647, 27(5), May 1969.

<sup>16</sup>Andrejs Baumkammers, OS, OM, OP, 24(4), Oct 1967.

<sup>17</sup>Kurt H. Thoma, Oral Pathology, p. 47.

<sup>18</sup>H.M. Goldman, S. Schluger, L. Fox, B.W. Cohen, Periodontal Therapy, p. 654.

<sup>19</sup>T.M. Graber, Orthodontics Principles and Practices, p. 406.

<sup>20</sup>K. Dale, American Journal of Orthodontics, 50(2), Feb 1964.

<sup>21</sup>A.H. Wuehrmann, OS, OM, OP, p. 795, 24(6), Dec 1967.

<sup>22</sup>Edward P. Henefer, OS, OM, OP, p. 658, 26(5), Nov 1968.

<sup>23</sup>W.G. Schafer, M.K. Hine, B.M. Levy, A Textbook of Oral Pathology.

<sup>24</sup>Jean C. Kaqueler, M. Massler, Journal of Dentistry for Children, pp. 13-23, 36(5), Sept-Oct 1969.

an attempt to maintain periodontal membrane integrity and limit resorption. Excellent osseous healing resulted, but a chronic inflammatory cell infiltrate, pulpal degeneration, and resorption occurred in the dental portion of the transplanted osseous-dental sections. In the areas where dentin was resorbed, calcified osseous tissue formed and led to ankylosis.<sup>25</sup> Another study involving endodontic overfilling demonstrated that multinucleated giant cells were always present in external resorption; an inflammatory infiltrate was sometimes present, sometimes not.<sup>26</sup>

External or internal resorption of unknown etiology or without an identifiable cause is termed idiopathic resorption. Presently, the majority of resorption must be termed idiopathic. An *Oral Health* report concerning a 17-year-old male who sustained traumatic injury to his lower anterior teeth, emphasizes that the cause of resorption is difficult to establish. Two years later the teeth were extracted because of periodontoclasia and caries. In one tooth trauma caused internal resorption; in an adjacent tooth trauma caused external resorption. Idiopathic resorption is often linked with a systemic problem. Its presence should prompt a detailed patient history and possible medical evaluation.

In external resorption, one area is often repaired while another area is being resorbed. The repair tissue consists of cortical bone or osteocementum. A reversal line is formed at the junction of the unresorbed area of the root and the newly formed hard tissue. There is a general tendency toward greater frequency and degree of resorption as age increases.

Hopefully the complete etiology of both internal and external resorption can be elucidated through further study. The dentist could then render better treatment for resorption and possibly prevent it. The term idiopathic resorption might then be laid to rest, obsolescent and scarcely mourned.

<sup>25</sup>Alan B. Luke, Philip J. Boyne, OS, OM, OP, p. 869, Dec 1968.

<sup>26</sup>J. Erasquin, Margarita Muruzabal, OS, OM, OP, 26(3), Sept 1968.

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## PHARYNGEAL FLAP: A CASE STUDY

*By LT Rose Mary Carroll, NC, USNR,\* Naval Hospital  
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Cleft lip and/or palate result when the embryonic structures of the face fail to unite. The defect may range in severity from a relatively simple cleft of the lip to involvement of the hard and soft palates, the maxilla and pre-maxilla.<sup>1</sup> It's a simple enough description. But the implications of this congenital defect for the patient and his family are anything but simple. The fact that this patient is an infant or a child merely increases the importance and complexities of the surgical and nursing care. Treatment begins at birth and it is often years before it can be completed. David B. represents just such a person.

David was born seven years ago with a right incomplete cleft palate which had been surgically repaired at the age of 22 months. He was recently admitted for a secondary repair of a velopharyngeal incompetence. The cause of David's deformity is uncertain. There was no familial history of such a defect and no evidence that his mother took any drugs, or had any illness during pregnancy, which might have been responsible. It is possible that emotional experiences of the mother during a certain point of gestation might affect fetal development, but this is difficult to determine.<sup>2</sup>

The physical, emotional and psychological status of children changes with time and each age level must be considered individually by hospital personnel.

Physically, David appeared as a well developed, well nourished male child, 44" tall and weighing 44 lbs. His general physical examination was essentially normal. Examination of his head, ears, eyes, nose and throat revealed an adequate palate repair, with minimal velar mobility and rather pronounced nasonnement. Examination of his tympanic membranes revealed polyethylene tubes in place without evidence of inflammation or infection.<sup>3</sup> Routine laboratory studies included a normal urinalysis, hematocrit of 32 volumes %, and a hemoglobin of 11.2 gm/100 ml.

This was to be David's fourth operation. In addition to the previous repair of his cleft palate, he had

undergone an adenoidectomy at two years of age, and a myringotomy two months ago because of chronic otitis media — a common complication in patients requiring cleft palate surgery.<sup>4</sup> As a consequence of chronic ear infection David suffered a 20% bilateral hearing loss.

David's emotional, psychological and sociological development seemed appropriate for a seven-year-old. Seven is an assimilative, quieting down age. The child may keep to himself more, preferring quieter, sitdown activities.<sup>5</sup> It is now that he begins to learn right from wrong, becomes more self-helpful; his attention span and coordination increase. Children of this age are more capable of understanding explanations and it is important to be truthful with them.

An average second grade student who had been receiving speech therapy for about two months, David appeared quiet, somewhat shy, but bright. He seemed to understand the explanation of the planned operation presented to him by his doctor. As the youngster told me, "I don't know what it's called, but they're going to fix the back of my throat." During my visits, he was not interacting with other children, but at the same time kept himself well occupied with toys or comic books. My impression was that he was "quite the young man."

Just as in clinical care, nursing care of the child in the operating room must be individualized, responsive to the child, his age, physical and emotional requirements.

Children deserve special care for a variety of reasons. Their physical and emotional reactions are different from those of an adult. They have greater nutritional requirements and their fluid and electrolyte balance is easily upset. They present wider and more rapid temperature variations and are more susceptible to infections. Insecurity and fear may be more formidable than actual pain.<sup>6</sup> Keeping these basic principles in mind, the circulating nurse adjusts her duties to meet the requirements of the situation.

Advance preparation of supplies is necessary in order to expedite all procedures and minimize the child's exposure time to the operating room and anesthesia. Handling is gentle and limited, disturbing the child as little

\*LT Carroll attended the course in Operating Room Technique and Management at Naval Hospital Boston, Chelsea, Mass. This paper was written as a partial requirement for the program. It was also presented in the Nursing Program of the Annual Spring Symposium conducted in May 1971 at Naval Hospital Boston, Chelsea, Mass.





The author visits patient before surgery.

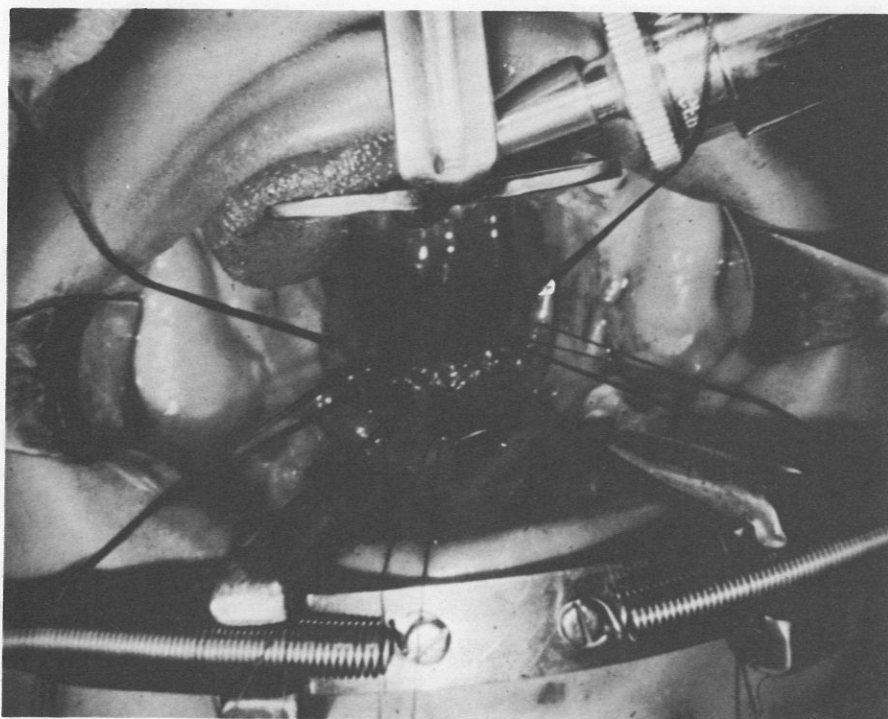
as possible. The presence of a friendly face, perhaps the nurse who has made a preoperative visit, serves to decrease the child's apprehension. David was a calm, "good" patient. He was awake both in the holding area and in the operating room. I'm sure his recent experience with surgery played an important role in this adjustment. Warming blankets, rectal probes and Bovie plate should be set up and ready for use. Setup of sterile supplies and assistance to the scrub nurse should be completed as much as possible before the child is brought to the operating theater so that the nurse, particularly if she knows the child, can effectively assist with induction of anesthesia and patient positioning. Sterile supplies in this case included a plastic pack with the addition of an A-sheet and instruments for cleft palate surgery. Numbers 11 and 15 knife blades, appropriate suture, gloves, Bovie cord and suction tubing were placed on the field. Skin preparation included a face wash with Zephiran.

When brought into the room and prepared for induction, the child is exposed to many hazards of which the nurse is particularly cognizant.<sup>7</sup> The patient must be carefully positioned and restrained on the table, and protected from extremes of cold or heat.

Induction of anesthesia may or may not present a problem. David made it clear to the anesthesiologist that he did not want to breathe gas through the mask and requested Pentothal Sodium. Intravenous Sodium



LT Rose Mary Carroll, NC, USNR checks her patient preoperatively.



Note superiorly based pharyngeal flap with sutures in edge and flap being brought down to the palate.\*

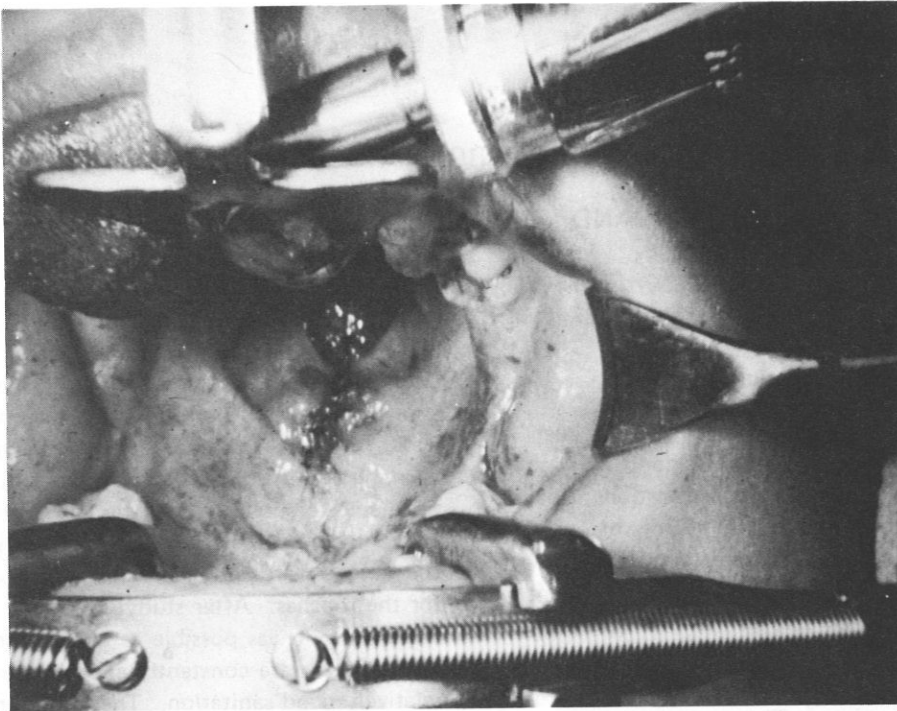
Pentothal was employed and provided smooth induction. An endotracheal tube was passed without event. The anesthesiologist and his equipment were positioned to the left side of the table; hyperextension of David's head was facilitated by the use of a shoulder roll. Draping included a memorial head drape, two fan-folded sheets across the body and an A-sheet. The endotracheal tube was positioned in a Dingman mouth gag and covered by the drapes.

A pharyngeal flap is formed by a permanent pedicle of mucosa, submucosa and muscle between the pharyngeal wall and the soft palate. Eighty to eighty-five percent success rate, i.e. correction of speech defect, has been reported with this method.<sup>8</sup> Because of the increased incidence of hearing loss, surgeons hesitate to interfere permanently with the nasopharynx by surgical intervention at too early an age (infancy). Surgery is generally performed after speech habits have been developed (age four to seven years). There are four possible variations of the procedure. An inferior flap is more popular because it is the easiest to do. Studies have indicated that the type of surgical approach employed has little effect on the final outcome.<sup>9</sup>

\*Photographs of pharyngeal flap were taken by CDR Gaspar Anastasi, MC, USN, Chief, Plastic Surgery, NH Boston.

Converse describes the mechanism of action of this flap as follows. A dynamic pedicle graft, which supplies nerve and muscle action to the soft palate, is placed in a pharynx which is small and narrowed. This flap reflects sounds emanating from the larynx; it diverts the voice stream from the nasal cavities and projects it forward through the mouth.

David's oropharynx was unusually narrow and dissection was difficult. After retraction of the soft palate with suture, the posterior pharynx was infiltrated with two cc of 0.5% lidocaine solution with epinephrine (to potentiate anesthesia, aid hemostasis and dissection). A 75 mm brow-based midline flap was designed. The flap was incised in an elliptical fashion, with a No. 15 knife blade and blunt dissection scissors; it was then dissected free from the muscularis layer. Forceps and traumatizing instruments must be avoided. The defect created by detaching this flap was closed with two 5-0 nylon sutures. A similar flap was fashioned over the velar region and soft palate; it was similarly dissected free from its mucosa. The anterior portion of the pharyngeal flap was anchored to the anterior margin of the "trap door" flap, with interrupted 4-0 and 5-0 nylon, and lined with the previously dissected submucous flap from the soft palate. This was anchored in position with 5-0 nylon sutures. Bleeding was minimal. Finally the mouth and nose



Palate is viewed after the flap has been set in.\*

were irrigated with saline and cleared of clots.<sup>10</sup> Anesthesia was terminated and the patient was extubated.

Immediately postoperatively the main concern is to maintain a clear airway; for the first 48 hours this is the nurse's primary consideration. Suctioning may be done carefully with a soft suction catheter. In the recovery room David's respirations were described as "croupy" and Decadron was administered. His elbows were splinted to prevent him from reaching to his mouth. During the evening after surgery David experienced some sanguinous drainage from his mouth and nose. Gentle packing and/or pressure will usually control any hemorrhage; it was not necessary in this case. Later on the ward a cold mist was ordered for the bedside. David was placed on a clear liquid diet for two days; subsequently he was advanced to a full liquid, and eventually a mechanically soft diet. Fluids could be taken through a straw but no other objects such as a spoon or lollipop were allowed. Good oral hygiene is important and the mouth was rinsed well after meals. No antibiotic treatment was instituted.

I visited David on his first postoperative day. A particularly quiet little patient in the playroom by himself, he was looking at comic books, with a copious amount of mucous dripping from his nose. As I wiped his nose and inquired how he felt, he nodded that he was all right. Suddenly a smile came across his face as his parents entered. While David's father carried him

back to his room, I spoke with the mother for a few minutes. She explained that David was a little bewildered by the surgery, and was even afraid to blow his nose. I suspect he was uncomfortable although he never complained. His mother suspected the patient was hungry, noting that he seemed tired and a little lonely. This visit from his parents seemed to be just what he needed. Although it is hoped that David has completed surgical treatment, his mother mentioned that David might possibly require additional treatment in the future for his ears.

Pharyngeal flap surgery is usually performed for one reason. Children with velopharyngeal incompetence have a pronounced nasal quality of voice which is usually not correctible with speech therapy alone. David was no exception. As I talked with him preoperatively this nasonnement was most apparent.

The success of this operation depends on a number of variables, including the extent of the congenital defect, nature of the speech defect, experience of the surgeon and the patient's age, sex, intelligence, hearing acuity and emotional stability. David offers many positive factors which would support an optimistic expectancy for the surgical result. (1) He did not have an extensive defect. (2) He was undergoing speech therapy. (3) He had an experienced surgeon. (4) He was of an optimum age, of average intelligence and from

(Continued on p. 23)



## A NEW COCKROACH CONTROL PROCEDURE FOR NAVAL HOSPITALS AND FIELD MEDICAL FACILITIES\*

By LCDR R. H. Grothaus, MSC, USN;\*\* HMC G. F. Boone, USN;\*\*\*  
and CAPT J. M. Hirst, MSC, USN (Ret).

### Introduction

The incompatibility of roaches and man has been well established. The justification for controlling cockroaches requires only two basic considerations. Roaches have been proven to be mechanical vectors of human pathogens and their presence creates a morale problem.<sup>1,2</sup> Unfortunately, roaches are rather persistent organisms and tend to be accepted as unavoidable members of institutional communities. Control procedures have been developed which succeed when adhered to with complete dedication.<sup>3</sup> There are only a few unique situations where standard procedures do not provide the level of control desired.

### Discussion

Recently, the authors became interested in cockroach movement in Navy medical facilities. Observations were made in both fixed and combat-ready facilities. Roach infestations were found to be centered in food preparation areas, but frequent "hot spots" were located throughout the structural complex.

The first explanation for the localized aggregations involved the premise that unauthorized food was being returned to wards and working spaces. This has always been the classical explanation offered by most survey entomologists when they encounter roaches in unlikely areas. It is probable that the classical answer is valid in most cases. However, the authors have found that in hospitals, there is one additional problem that may confuse survey personnel.

Recent work has revealed that food service carts provide good harborage for *Blattella germanica*, the

German roach. A detailed survey in one hospital showed that each food service cart supported as many as 20 roaches. These carts were subjected to standard cleaning and maintenance programs, but the insects were able to survive with little apparent difficulty. The use of these food service vehicles to deliver meals to the various wards provided an ideal dispersal system for the roaches. After studying the use pattern of these carts, it was possible to understand why roach infestations were constantly appearing in areas with relatively good sanitation. The importance of a portable harborage does not seem great until it is realized that 20 roaches, under ideal conditions, could increase to several million in less than a year.

The Entomology Division of the Naval Medical Field Research Laboratory has developed a disinsectization unit to help control roach movement in medical facilities with centralized food service systems. The original unit consisted of a box constructed of 3/4-inch plywood. The box was lined with plastic and the seams were sealed. The front panel was hinged and utilized as a door. The box was designed to hold one food service cart.

The disinsectization unit was charged with 2,2-dichlorovinyl dimethyl phosphate (DDVP) vapors by placing standard resin strips inside of it. DDVP has been found to be a moderately toxic OP insecticide with good vapor-killing action. This chemical has an oral LD 50 to rats of 56 mg/kg and has been considered safe enough to be used in the Navy system. The use of slow-release strips eliminated residual contamination danger, but the exposed equipment was still washed after each treatment in the chamber. The authors found that by placing 18 mini-strips (2 inches) in the chamber, 100% of the roaches were killed in 24 hours. The same vapor level was obtained by using three commercial "No Pest Strips®". The small strips were utilized because they were readily available from the Federal supply system (FSN 6840-142-9438). LT 100 studies were conducted to determine the number of strips needed for a total kill and it was found that fewer than 18 strips could be used, but the exposure

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The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.



time was greatly increased. This restricted the utilization time of the carts and was undesirable from a food service costing position.

This chamber was operated for one year at the Naval Hospital, Camp Lejeune, N.C. and it reduced the roach population from a maximum of 20 roaches per cart to an average of less than one during that period. Caged roach tests were conducted during the year to determine the effective life of the strips in the Camp Lejeune climate. The strips had to be replaced every two months to maintain 100% control. The most desirable treatment schedule was found to involve treating each cart once every 12 days. In this way, the reproductive cycle was broken and adult roaches did not have the opportunity to reproduce in the depths of the units.

### Summary

Cockroaches cause much concern to patients and medical personnel and frequently create such problems as "ward entomophobia." Normal control procedures involve sanitation and the judicious use of insecticides in food service areas. Additional roach problems have been encountered in food service carts. The roaches live and reproduce in the carts and disperse by leaving the carts at locations throughout the hospital.

A simple method of destroying these roaches consists of placing the carts in a box containing DDVP vapors. The vapors penetrate inaccessible areas and kill

all of the roaches within 24 hours. The carts are treated at least every 12 days, which breaks the reproductive cycle. The box can be located near but not in food preparation areas or areas where exposed food can absorb the vapors. Considering the vapor level and the toxicity, there is little danger to humans when the box is located in open spacious areas. The box should be labeled and locked, however, as there is always the possibility that someone might use the box as a retreat. The total cost of construction should be less than \$90. The cost of insecticide changing should be approximately \$10 a year.

### Acknowledgment

The authors wish to express their gratitude to LCDR M. L. Martin, MSC, USN, for consenting to review the manuscript and to make suggestions.

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(Continued from p. 21)

an apparently emotionally stable, loving family situation. It is important to note, however, that speech defects resulting from malfunctioning speech mechanisms and from poor perception of speech sounds, are not readily altered by surgery.<sup>11</sup> David's 20% hearing loss will probably affect the rate at which his speech will be improved. Studies have shown that though patients with hearing loss have responded poorly to speech therapy at first, excellent results have followed a longer program of therapy.<sup>12</sup> My untrained ear sensed a difference on the first postoperative day, and I was told that David had been visited by his speech therapist who reported a definite difference. With more therapy David's speech will hopefully appear normal.

Five days after admission, my little friend was discharged home, to be followed thereafter in the Plastic Surgery clinic. A pharyngeal flap, and David, are indelibly imprinted in my mind.

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## THE HEMATOLOGISTS' CORNER —

### MEGALOBLASTIC ANEMIA — FOLATE DEFICIENCY

*By CDR Dominick N. Pasquale, MC, USN, and CDR Richard A. Burningham, MC, USN; Hematology Branch, Medical Service, Naval Hospital, Philadelphia, Pa.*

Often recognized as part of other disease states, folate deficiency anemia is second only to iron deficiency in importance and frequency.<sup>1</sup> In the early 1930's, nutritional anemias resembling pernicious anemia were shown to respond to autolyzed yeast preparation. At this point, it was realized that not all megaloblastic anemias were identical, from an etiologic or therapeutic standpoint. Later studies showed the active principal to be the folic acid contained in the yeast preparation.<sup>2</sup> After folic acid was isolated in 1941, it was considered to be an ideal form of therapy for pernicious anemia, but the resultant worsening of the neurologic features of the disease proved this theory wrong. Herbert's work in 1961 helped to put folate deficiency as a cause of anemia into proper perspective.<sup>3</sup>

Using a newer classification of the various anemias,<sup>4</sup> folate deficiency is listed under nuclear maturation defects, along with two other hematological conditions associated with megaloblastic maturation: Vitamin B12 deficiency and erythroleukemia (Di Guglielmo syndrome). The key erythrocyte abnormality is the macrocytosis noted on examination of a smear of the peripheral blood. The erythrocytes tend to have an oval configuration and the term "macro-ovalocytosis" is commonly used. As the anemia becomes more marked, significant poikilocytosis may be present. Generally, hypochromia is not a feature unless associated iron deficiency is present. Basophilic stippling may be noted. Nucleated red blood cells may be seen and often appear megaloblastic (Figure 1). The most constant leukocyte abnormality is hypersegmentation of the neutrophils. The white blood cell and platelet counts may also be reduced. It must be emphasized that the morphology does not help to differentiate between folate and vitamin B12 deficiency, since the changes as noted may be identical in both conditions. The bone marrow examination typically shows

hypercellularity with megaloblastic features of all cell lines, and most prominently in the erythroid series (Figure 2). Normoblastic maturation in a patient with iron deficiency state is shown for comparison (Figure 3).

Although an extremely fascinating and complex subject, the biochemistry of the folic acid compounds will be only briefly described. Folic acid is composed of three main parts: (1) a two-ringed nitrogenous compound called a pteridine; (2) p-aminobenzoic acid; and (3) glutamic acid. The related vitamins which comprise

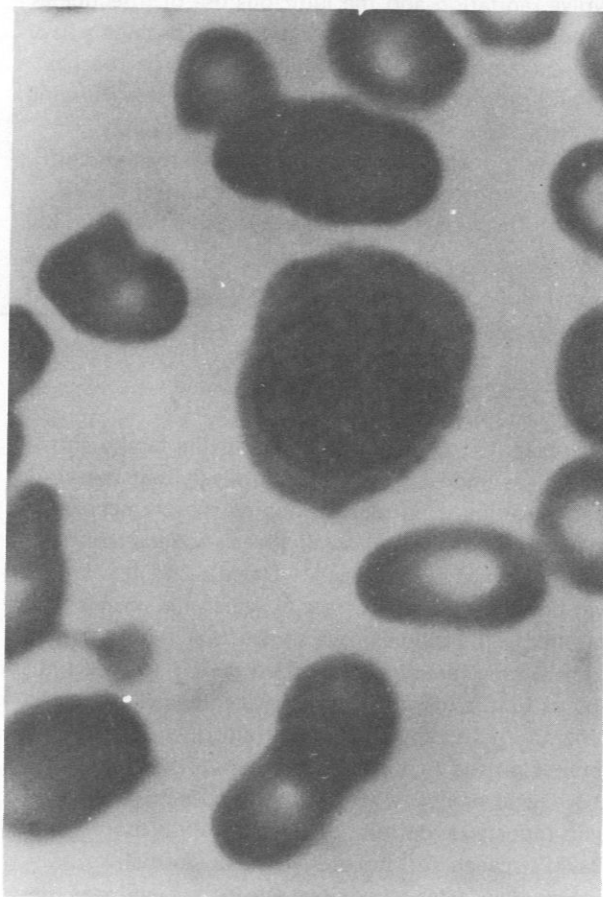


Figure 1. Megaloblastic nucleated red blood cell in the peripheral blood.

The opinions expressed herein are those of the authors and cannot be construed as reflecting the views of the Navy Department or of the naval service at large.

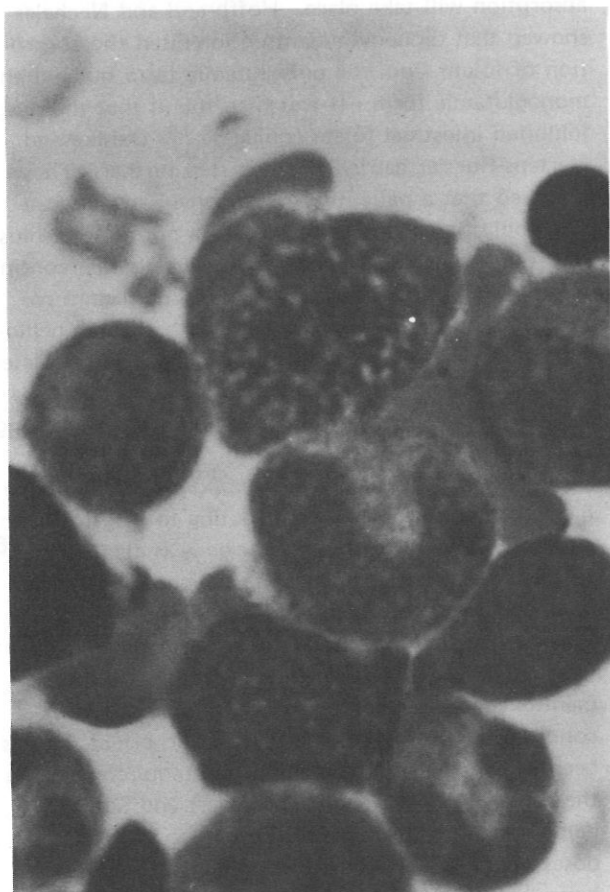


Figure 2. Bone marrow demonstrating megaloblastic erythropoiesis. A giant band is also seen.

the folates (and it is better to speak of folate deficiency rather than folic acid deficiency), differ in two respects. The first difference is in the number of glutamic acid groups present. The additional glutamic acid molecules are conjugated in peptide linkages. Those most commonly occurring are the monoglutamates (pteroylglutamic acid), triglutamates, and heptaglutamates. The conjugates are acted upon by folic acid conjugase which converts the naturally occurring polyglutamic forms to the monoglutamic form, the latter being readily absorbed by the small intestine.

The second difference is in the structure of one of the rings which occurs when folic acid is converted to folinic acid. It is important that folic acid (PGA) can be converted to folinic which is much more active biologically. Vitamin B12 and ascorbic acid are involved in the conversion of PGA to folinic acid either directly or indirectly.

Folic acid aids in the synthesis and transfer of methyl groups and in the utilization of the single carbons in the synthesis of serine, thymine, purines, and nucleotides.

The causes of folate deficiency may be classified into five major categories:

1. *Dietary Deficiency.* Poverty and associated dietary habits will lead to folate deficiency rather frequently. In a folate deficient diet, anemia will generally develop after three to four months when the body stores of folate have become depleted.<sup>5</sup> The preparation of foods will also affect the amount of folate in a diet. Since folate is water-soluble, as well as heat labile,<sup>3</sup> the folate activity can be lost in cooking food. Food faddists and the "tea and toast" dieters among the elderly, are common examples of those who restrict their intake of folate-containing foods. Alcoholics also have a rather high incidence of folate deficiency because of decreased food intake. Alcohol itself contains no folic acid, and has a direct inhibitory effect on folate metabolism.<sup>6</sup>

2. *Increased Requirements.* Pregnancy is one of the most frequent causes of folate deficiency. Chanarin, MacGibbon, O'Sullivan, and Mollin in 1959, using folic acid clearance and absorption tests showed that folic

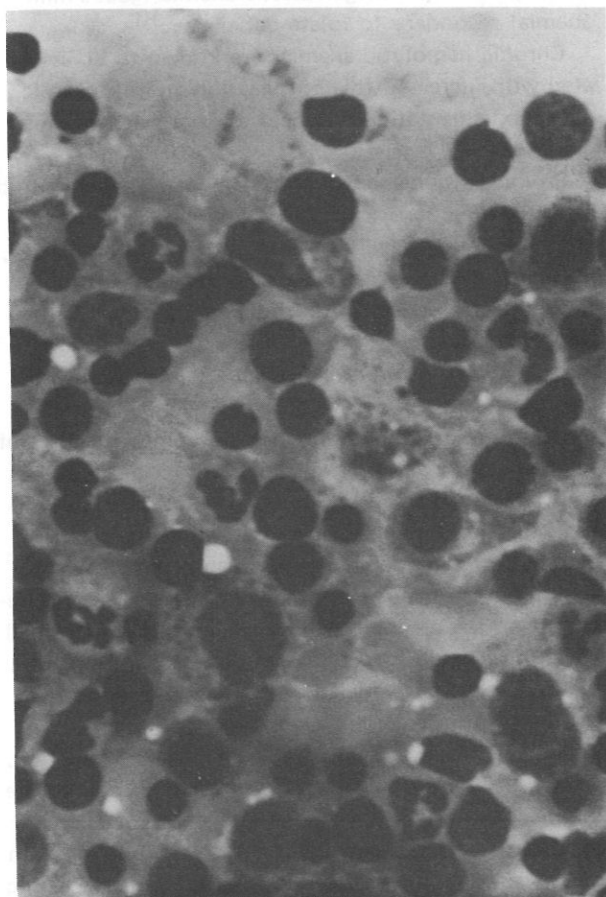


Figure 3. Normoblastic erythroid hyperplasia in a patient with iron deficiency.



acid depletion in pregnancy is not confined to those women who are anemic;<sup>7</sup> however, women who routinely receive folate supplement have significantly higher hemoglobin levels at term than do those who do not. Most investigators are of the opinion that megaloblastic anemia in pregnancy develops in those patients who enter pregnancy with folate deficiency, or at least decreased stores. Further studies have shown that the sharpest drop in folate levels occurs in the third trimester of pregnancy<sup>8</sup> and that lactation may also add further to the development of low folate levels. In spite of these changes in folate level, severe megaloblastic anemia occurs in only a small percentage of patients; however, considering the increased need for folate during pregnancy and the changes in folate levels described, it has been suggested that prophylactic treatment with folate supplement be given at dose levels of 300 micrograms daily.<sup>9</sup>

Infancy and active growth are associated with increased requirement of folate, but the development of folate deficiency anemia is rather uncommon, although infants being raised exclusively on goat's milk will frequently develop a megaloblastic anemia (goat's-milk anemia) secondary to folate deficiency.<sup>10</sup>

Chronic hemolytic anemias are known to be associated with increased folate utilization and often folic acid supplementation will help to improve the hemoglobin level.<sup>11</sup>

Prolonged hyperthyroidism, malignancy, rheumatoid arthritis, infections, cirrhosis of the liver, and other chronic diseases have been implicated in this category,<sup>1</sup> but whether it is due to increased requirement or simply decreased intake secondary to anorexia is not well established.

**3. Malabsorption of Folate.** Folate malabsorption often results in megaloblastic anemia. Tropical sprue and idiopathic steatorrhea are common causes of folate malabsorption, as are the blind loop syndromes and widespread small bowel diverticulosis.<sup>12,13</sup> In some instances, there is impaired absorption of the natural occurring polyglutamic folates, but the monoglutamic form may be normally absorbed. Gardner reported on the efficacy of tetracycline therapy in small bowel diverticulosis to increase folate absorption by the human host.<sup>12</sup> Malabsorption abnormalities may also be seen in leukemia, carcinoma, lymphoma, Whipple's disease, and extensive small bowel resection.

**4. Inhibition of Folate Absorption.** Long before the mechanism was discovered, megaloblastic anemia had been associated with long-term diphenylhydantoin therapy. As mentioned previously, naturally occurring folates are primarily in polyglutamic form and are broken down to the monoglutamic form before

absorption will take place. Hoffbrand and Necheles showed that diphenylhydantoin inhibited the absorption of folate from the polyglutamic form but not the monoglutamic form. It was then found that the drug inhibited intestinal folate conjugase.<sup>14</sup> Dahlke and Mertens-Roesler carried this one step further. They observed that a patient with anticonvulsant-induced megaloblastic anemia responded to a normal diet plus the addition of chick pancreas conjugase while continuing to take anticonvulsant drugs.<sup>15</sup> For certain patients, such as alcoholics, patients with chronic hemolytic state and other conditions associated with folate deficiency mentioned above, should receive supplemental folic acid if they are receiving in addition, long-term anticonvulsant therapy.

**5. Inhibition of Folate Metabolism.** One of the most common problems contributing to megaloblastic anemia secondary to folate deficiency is alcoholism.<sup>16</sup> In addition to the anemia, these patients often have leukopenia and thrombocytopenia. Sullivan and Herbert have extensively studied the relationship between alcohol and anemia.<sup>6</sup> The fact that the above mentioned parameters improved upon cessation of alcohol ingestion, suggested a suppressant effect. It has been shown that the daily folic acid requirement is in the range of 50 micrograms. Herbert and Sullivan demonstrated brisk hematological responses to higher doses of folate despite continued alcohol ingestion; however, megaloblastic changes were still present in the marrow. When the alcohol was discontinued, the marrow morphology became normoblastic in 4-10 days. As previously mentioned, alcohol would appear to directly inhibit tissue folate. The site is unknown, but the liver would appear to be the major site for the action of the alcohol.

The signs and symptoms of a folate deficiency are varied and inconsistent. Glossitis, diarrhea, and gastrointestinal discomfort may be marked. Neurological symptoms usually are not present, but the peripheral neuropathies of associated diabetes or alcoholism may lead to some confusion.

As previously noted, the morphological signs in the peripheral blood and marrow are identical for the megaloblastic anemias caused by folate deficiency or vitamin B12 deficiency. Therefore, morphology cannot be used to distinguish these two deficiencies and other methods are needed.

Two specific methods of making this distinction are (1) assay of serum for folate and B12 levels, and (2) clinical trial of folic acid and/or vitamin B12. The assay studies for folate by the *Lactobacillus casei* method are generally accurate and reproducible. Values below 2 ng/ml are considered diagnostic, while



levels above 4 ng/ml are normal. Vitamin B12 levels are usually normal at 200-900 pg/ml.

Hansen and Weinfeld reported on the metabolic effects and diagnostic value of small doses of vitamin B12 and folic acid in megaloblastic anemias.<sup>17</sup> All cases of folate deficiency responded to small doses of folic acid with an adequate reticulocyte peak, whereas the reticulocyte peak in the pernicious anemia group never reached the expected values. It is now recommended that not more than 50 micrograms per day of folic acid be given in a clinical trial in order to minimize any reticulocyte response which may occur in a patient with pernicious anemia. During the clinical trial, the patient must avoid all foods rich in vitamin B12 or folates (leafy green vegetables, grains, nuts, eggs, cheese, liver, fresh fruits, and milk). A reticulocyte response begins in 3-5 days and peaks between 5-10 days after a patient is treated with the "physiologic" dose of the correct vitamin (50 micrograms of folic acid or 1-5 micrograms of vitamin B12). If the first vitamin does not produce a response, then the other vitamin should be used to make the diagnosis. It is important to administer the daily dose of the vitamin parenterally and to follow reticulocyte counts daily or at least every other day.

The treatment is rather simple and specific for correction of the folate deficiency anemia. The minimum daily requirement for the adult is between 50-100 micrograms, while 300-400 micrograms are required by the pregnant woman. Five milligrams of folic acid orally, given daily for four weeks, is sufficient to treat a severe folate deficiency anemia and to restore tissue stores to normal. During pregnancy, when folate deficiency anemia develops, the folic acid should be continued through the period of lactation. Needless to say, before therapy is discontinued, it is most important to determine and correct the basic cause for the deficiency.

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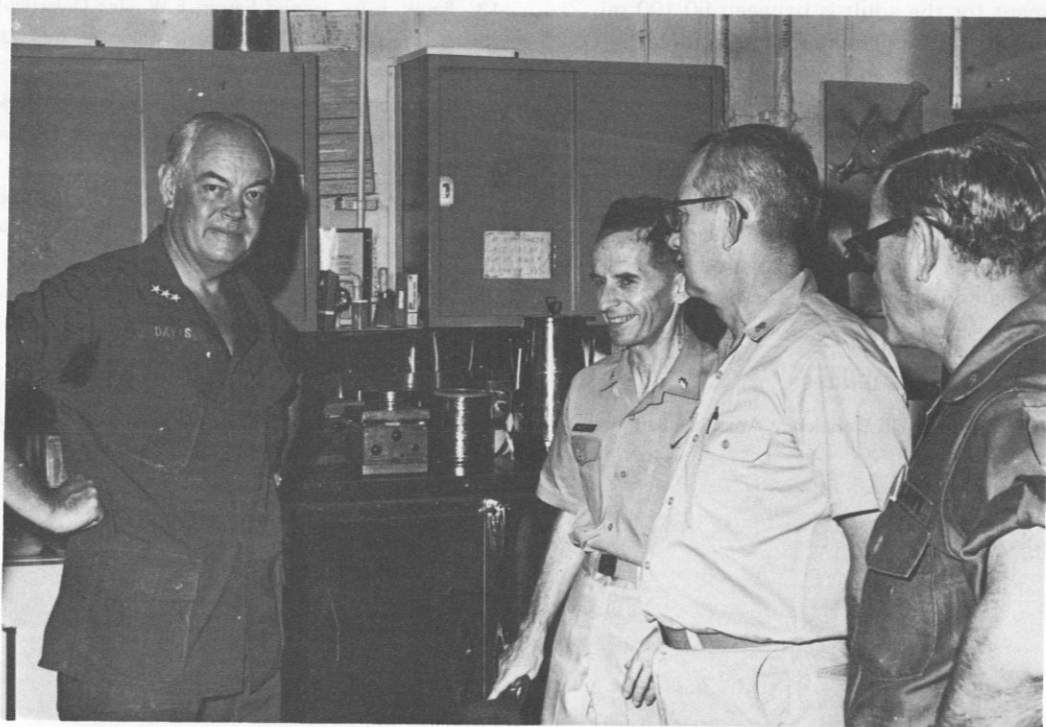
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## FY 1972 FLAG OFFICER SELECTION



CAPT Willard P. Arentzen, MC, USN

*Willard Palmer Arentzen* was born on 5 June 1921, in Kirkwood, N.J. He graduated from Temple University in 1943 and earned his MD degree at Hahnemann Medical College in Philadelphia, Pa., in 1946. CAPT Arentzen was commissioned LTJG in the Medical Corps of the Naval Reserve in March 1946, and interned at the Naval Hospital, Chelsea, Mass., where he subsequently remained as Ward Medical Officer for several months. Periods of duty followed in USS Yosemite, USS Vulcan; at Naval Hospital Newport, R.I.; and as Medical Resident at NNMC, Bethesda, Md., and Naval Hospital Philadelphia, Pa. He transferred from the Naval Reserve to the U.S. Navy in January 1950. In Sept 1952 he reported for instruction (Basic Course in Naval Medicine) at the Naval Medical School, NNMC, Bethesda, and was Assistant Medical Officer at the Naval Facility, London, England from June 1953 to August 1955. There followed a term as Resident at the Naval Hospital, Bethesda, and he reported as Assistant Chief of Medical Service at the Naval Hospital Camp Lejeune, N.C., in Oct 1956. From Sept 1959 to July 1964, CAPT Arentzen was Head of Planning and Special Projects, Medical Corps Branch, BUMED. After serving as Executive Officer and Chief of Medical Service at Naval Hospital Annapolis, Md., he



VADM George M. Davis, MC, USN, Surgeon General (left) visited USS Sanctuary during the period when CAPT Arentzen (on the Surgeon General's immediate left) was CO of the Naval Hospital in SANCTUARY.

assumed command of the Naval Hospital in USS SANCTUARY in Aug 1968. Awarded the Legion of Merit "for exceptionally meritorious conduct . . . during combat support operations against the enemy . . .," his citation further states in part: ". . . Captain Arentzen directed the operations of the hospital most effectively and efficiently in the support provided to the I Corps Tactical Zone of the Republic of Vietnam. With the hospital providing services on station for periods up to one hundred and twenty days, he instilled in his subordinates a determined devotion to duty which enabled them to contribute maximum efforts for extended periods of time. This complete dedication made it possible for the hospital staff to handle the peak admission loads of the 1969 TET offensive and other periods in a noteworthy and admirable manner."

In addition to the Legion of Merit and the Navy Unit Commendation Ribbon, CAPT Arentzen has the American Campaign Medal; World War II Victory Medal; National Defense Service Medal with bronze star and the Vietnam Service Medal with three stars. From the Republic of Vietnam, he has been awarded the Navy Distinguished Service Order Second Class; Armed Forces Honor Medal First Class; Republic of Vietnam Campaign Medal with Device and the Republic of Vietnam Armed Forces Meritorious Unit Citation (Gallantry Cross).

CAPT Arentzen has been Commanding Officer at Naval Hospital Camp Lejeune since Aug 1969. His selection for the rank of Rear Admiral was approved by the President on 6 May 1971.

*Anthony Kasimir Kaires* was born in Brooklyn, N.Y., on 5 Oct 1915. He attended Brooklyn College and the New York University College of Dentistry, from which he received his Doctor of Dental Surgery degree in 1942. In October 1942 he was appointed LTJG in the Dental Corps of the Naval Reserve. Upon reporting for active duty in Jan 1943, he was briefly assigned to the Naval Training Station, Sampson, N.Y., and transferred to the Armed Guard School at Shelton, Va., in Nov 1943. Subsequent dental duties were performed at the Sub-Chaser Training Center, Miami, Fla.; the Atoll Command, Ulithi; Cub NINETEEN, Tsingtao, China; in the USS Kermit Roosevelt (ARG-16), and; at the Naval Personnel Separation Center, Lido Beach, Long Island, N.Y. As dental officer at the Naval Hospital St. Albans, N.Y., he transferred from the Naval Reserve to the U.S. Navy in Nov 1946. In 1949 CAPT Kaires attended a postgraduate course in prosthodontics at the Naval Dental School, NNMC, Bethesda, Md., where he remained as Head of the Crown and Bridge



CAPT Anthony K. Kaires, DC, USN

Department until Nov 1950. After tours of duty in USS Nereus (AS-17) and at the Administrative Command, NTC, San Diego, he devoted a year to postgraduate residency training in advanced prosthodontics at the Naval Dental Clinic, Marine Corps Base, Camp Pendleton, Calif. He subsequently continued his residency in advanced prosthodontics at the NTC, San Diego, until June 1955, remaining there for duty until Dec 1957. Subsequent duty assignments were: Senior Dental Officer at the Naval Station, Sangley Point, P.I.; Prosthetic Dental Officer at the Dental Clinic, Naval Base, Brooklyn, N.Y.; Diagnostician and Clinical Supervisor at the Naval Submarine Base New London, Groton, Conn., and; Senior Dental Officer, NAS Point Mugu, Calif. Since June 1968, CAPT Kaires has served as Head, Professional Branch, Dental Division, BUMED. He is particularly known and admired by U.S. NAVY MEDICINE as our Dental Corps Editor, and has published numerous professional articles in the field of prosthodontics. His selection for the rank of Rear Admiral was approved by the President on 6 May 1971.

CAPT Kaires has the American Campaign Medal, Asiatic - Pacific Campaign Medal, World War II Victory Medal, China Service Medal, and the National Defense Service Medal with bronze star.

He is a member of the American Dental Association



and a Fellow in the American College of Dentists and American Prosthodontic Society. In addition, CAPT Kaires is an honorary member of the Philippine Dental Association and the Armed Forces Dental Association.

His family is of particular professional interest. His wife, the former Miss Pauline Mary McNally, was previously a Captain in the Women's Army Corps and served during World War II. One daughter is an Ensign in the Navy Medical Scholarship Program, and another daughter is a college student preparing for a nursing career.

*Richard Deaton Nauman* was born in Richmond, Va., on 21 July 1920. He received his BA degree from the University of Virginia in 1942, and the degree of Doctor of Medicine at the University of Virginia Medical School in 1945. Commissioned LTJG in the Medical Corps of the U.S. Naval Reserve in 1945, he interned at the Naval Hospital Charleston, S.C., and subsequently served as Medical Officer at the Naval Receiving Station, Charleston. In November 1946 he transferred from the Naval Reserve to the U.S. Navy. Following service in USS LSD-17 (Amphibious Force, Atlantic Fleet), he entered the School of Aviation Medicine at Pensacola, Fla., in 1947.

Designated Naval Flight Surgeon in April 1948, CAPT Nauman joined Air Transport Squadron SIX and in that assignment participated in Operation VITTLES, the aerial resupply of West Berlin during the period June 1948 to May 1949, for which he was awarded the Air Force Commendation Medal. From June 1949 to February 1950 he served with Air Transport Squadron FORTY-FOUR, after which he had duty at the Naval Air Facility, Annapolis, Md. In May 1952 he reported as Flight Surgeon with Air Transport Squadron EIGHT and served with that squadron during its participation in the Korean Airlift. In August 1955 he was assigned to Air Transport Squadron ONE and in September 1958 transferred to the USS Independence (CVA-62) for duty as Senior Medical Officer.

He was Senior Medical Officer at the Naval Air Station, Cecil Field, Fla., from June 1961 to August 1963, after which he was assigned as Senior Medical Officer at the Naval Air Station, Jacksonville, with additional duty as Staff Medical Officer on the Staff of



CAPT Richard D. Nauman, MC, USN

Commander Fleet Air, Jacksonville. In August 1968 he assumed command of the Naval Hospital, Patuxent River, Md. As such he served additionally as Staff Medical Officer and Flight Surgeon at the Naval Air Test Center and on the Staff of Commander Fleet Air, Patuxent and as Flight Surgeon at the Naval Air Station. He became Commanding Officer of the Naval Hospital, Memphis, Millington, Tenn. in July 1970.

In addition to the Air Force Commendation Medal, CAPT Nauman has the American Campaign Medal; World War II Victory Medal; Medal for Humane Action; Navy Occupation Service Medal; Europe Clasp and Berlin Airlift Device, and; the National Defense Service Medal with bronze star.

In May 1971, Dr. Nauman was elected Fellow in the Aerospace Medical Association. His selection for the rank of Rear Admiral was approved by the President on 6 May 1971. 🇺🇸



# Read on Macduff...

The following "immortal classics" have been gleaned from numerous medical reports which have been brought to our attention. If you commonly sign reports without reading them, you may be dubbed Macduff. Names and identifying marks have been omitted to protect the guilty. The source material is so extensive that our readers are urged to assist by contributing any "Read on Macduff's" which may be encountered elsewhere.

The patient was disabled when he suffered a wound as a result of *enema* action.

There is a healed surgical scar on the medial aspect of the left arm which is ten inches in length above the elbow, two and one-half inches below the positive Tinel's sign over the entire wound, and four inches below the wound. *That just about wraps it up.*

... a mild *reproductive* cough ...

The patient was placed in a Velpeau cast for one month and then re-X-rayed and taken to surgery where the chest was removed and a bone graft was performed. *We suspected all along that you were leading up to something.*

Diagnosis: Fracture, L-4, late effects of renal calculi. *Clearly late.*

He was discharged to duty on 10 October 1968 with the recommendation that he avoid prolonged standing or any running requiring use of the left leg. *You must understand, we can only recommend.*

There is a healed abdominal *laboratory* scar with sutures in place.

The patient's flap was then detached, and he has behaved nicely ever since. *Bless his heart!*

Diagnosis: Infiltrate, pulmonary, tuberculosis strongly suspect, minimal, probably active. *How can you be so darn sure?*



Subsequent dental and plastic surgical care have resulted in a well-healed mandibular fracture, multiple well-healed skin grafts and burn scars, partial loss of the triceps brachii muscle and two third's loss of the left ear. *This MO got it all together.*

... *capillitium* of the right *humorous* ... *That it is!*

*Lymphatenology* was noted on examination of the neck. *Tight collars will do it every time!*

He stated that the only function he is able to carry out normally on two legs is walking. *Seems reasonable.*

Diagnosis: Carcinoma vallecule ... *Groovy!*

He complained of inability to hear in environments that have high *ambulant* noise.

His genital system reveals no history of illness or complaints. *Taciturn testes.*



He was mildly *cushionoid* in appearance. ☘

## HIGHLIGHTS OF FY 1971

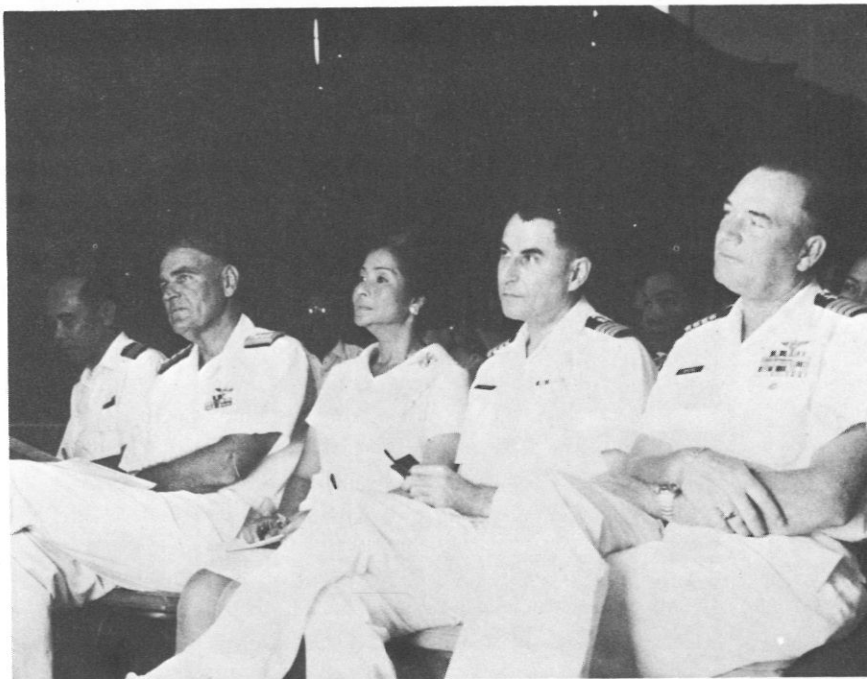
*With the beginning of Fiscal Year (FY) 1972, U.S. NAVY MEDICINE has had occasion to review an accumulation of reports which were received too late for timely publication during FY 1971. It is evident that increasing awareness of the need for providing us with this material is developing among various commands. We ask for your continued support and even greater response during FY 1972.*

**U.S. Naval Air Station Dental Department, Cubi Point, R.P.** donated supplies and dental care to Olongapo

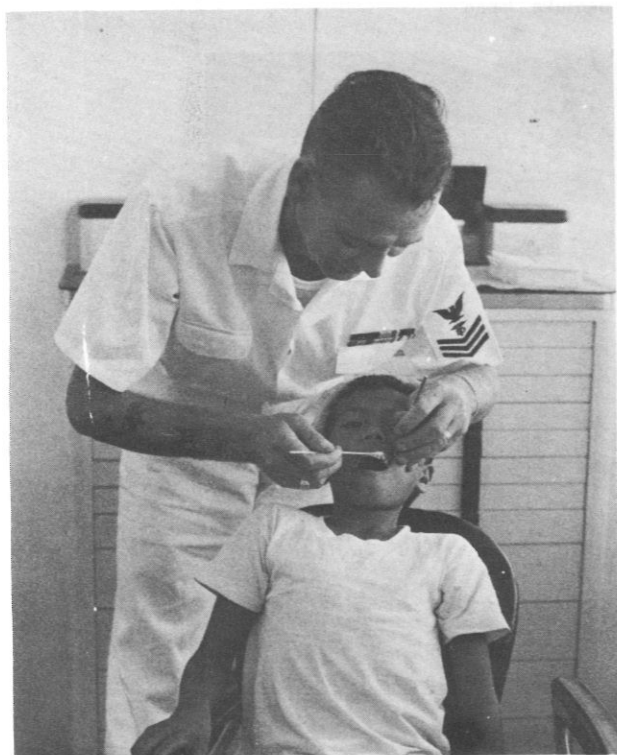
City's Boys' Town. CAPT Irvin Sontag, DC, found a pressing need for a dental care program after visiting and examining residents of Boys' Town. A Seventh Fleet ship donated a dental unit. Through combined efforts of Navy personnel at Cubi Point and a dental repairman at the Subic Bay Naval Station, plumbing was installed and a dental office was created. An air compressor and reworked air conditioner were placed in the new unit which was officially presented to Boys' Town on 21 April 1970.



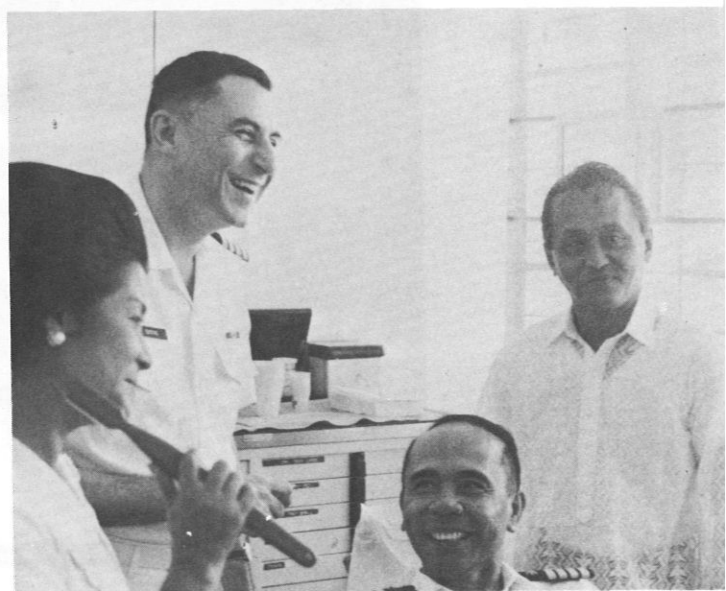
Official Opening. Standing in foreground (from left to right) are: Dr. Mariano Soriano, President, Olongapo City Dental Society; CAPT R. I. Myers, USN, CO, NAS Cubi Point; Mayor Amelia Gordon of Olongapo City, cutting ribbon; Rev. Sister Mary Pauline, Administrator of Boys' Town, and; CAPT I. Sontag, NAS Cubi Point Dental Officer.



Seated at ceremonies (from right to left) are: CAPT R. I. Myers, USN; CAPT I. Sontag, DC, USN; Mayor Amelia Gordon; RADM V. G. Lambert, Commander Naval Base, Subic Bay, and; CAPT F. Martir, Philippine Navy.

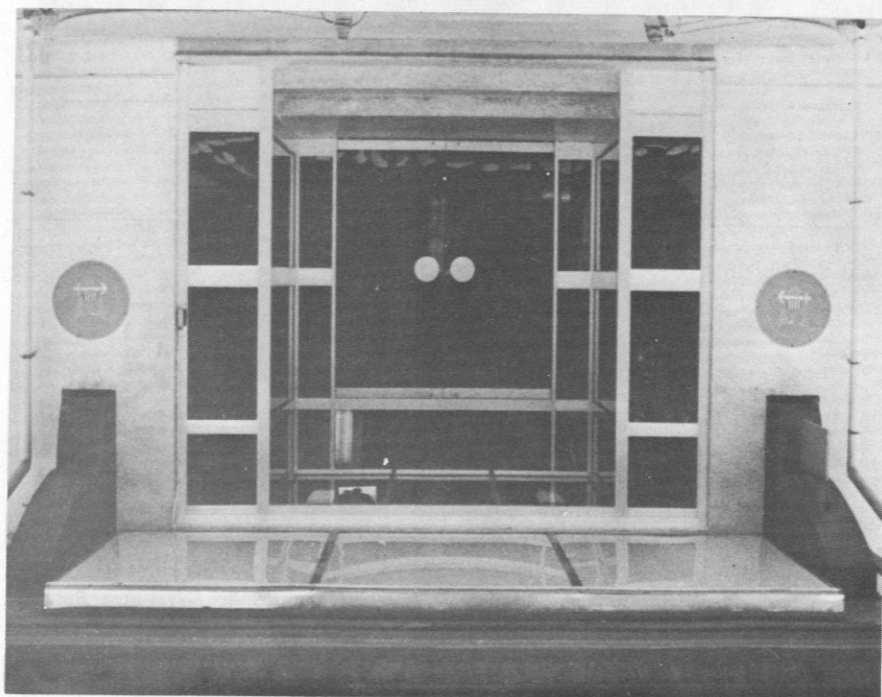


DT1 Wade Lane, USN, treats resident of Boys' Town.



CAPT F. Martir sits in donated dental chair. Surrounding him (from left to right) are: Mayor Amelia Gordon, CAPT I. Sontag, DC, and Dr. Soriano.

**U.S. Naval Hospital, Yokosuka, Japan** completed face lifting and the front entrance now presents a most attractive appearance.



U.S. Naval Hospital, Yokosuka, Japan





U.S. Naval Hospital Yokosuka, Japan, won first place award in the 1970 Independence Day Parade. The impressive float is seen in the photos.



U.S. Naval Hospital Yokosuka celebrated its 20th anniversary with a ceremony on 11 Sept 1970. Representing the Surgeon General, RADM Frank B. Voris, MC, USN, reviewed the hospital's accomplishments. "In the last 20 years," he said, "the hospital has handled over 173,000 patients, 23,000 of them as a result of the Vietnam conflict." The hospital was awarded the Navy Unit Citation in 1951 "for extremely meritorious service in the treatment and hospitalization of 5,804 war casualties and other patients from 5 Dec 1950 through 15 Jan 1951." CAPT Philip O. Geib, MC, Commanding Officer at the hospital in 1970, presented "plank owner" certificates to 23 Japanese civilians working at the hospital who were employed by the dispensary when it was commissioned a hospital in 1950.

The new \$1,200,000 medical detachment facility at the Marine Corps Recruit Depot Parris Island, S.C., was officially opened 10 Sept 1970. Five dispensaries were consolidated within the new building: the old Main dispensary, including all permanent personnel medical care facilities, pharmacy, environmental sanitation offices, Master At Arms office, detachment administrative and records offices; the old Recruit Processing dispensary, responsible for recruit screening examinations, immunizations and recruit health record sections; the Optical Clinic; the Neuropsychiatric Unit, and; the



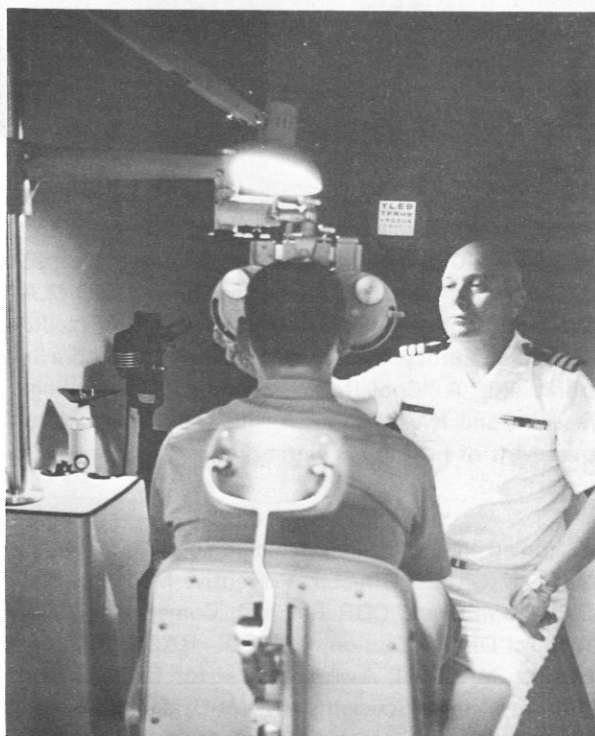
Ribbon cutting is accomplished by (left to right): CAPT R.G. Williams, MC, USN, CO Naval Hospital Beaufort, S.C., and Surgeon General's representative at the opening ceremonies; MGEN O. F. Peatross, USMC, Commanding General Marine Corps Recruit Depot, Parris Island, S.C., and; CAPT J.T. Egan, Jr., MC, USN, Officer in Charge of Medical Detachment, MCRD, Parris Island, S.C.



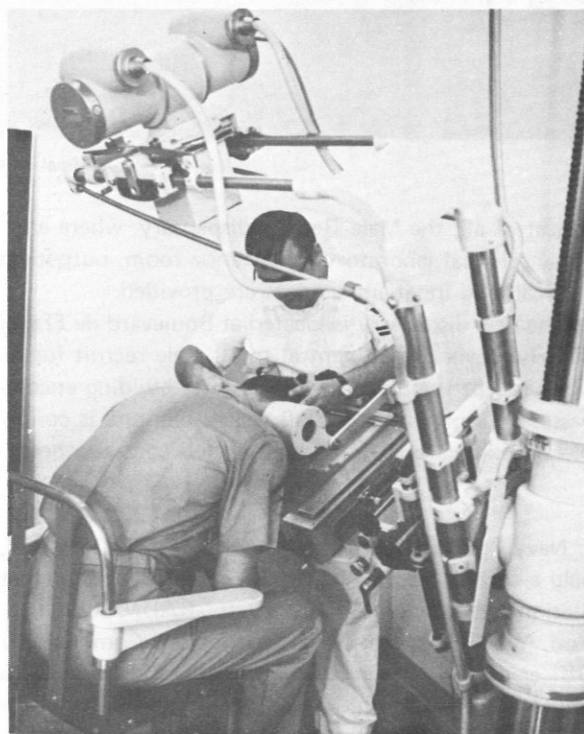
View from lobby of new building.



HM2 K. M. Shipley, USN in Medical Storeroom.



CDR Jack R. Lane, MSC, USN, examines patient in Optometry Clinic.



HM2 W. J. Civiello, USN positions patient for study with 500 MA X-ray machine.





Medical Ward before occupancy.

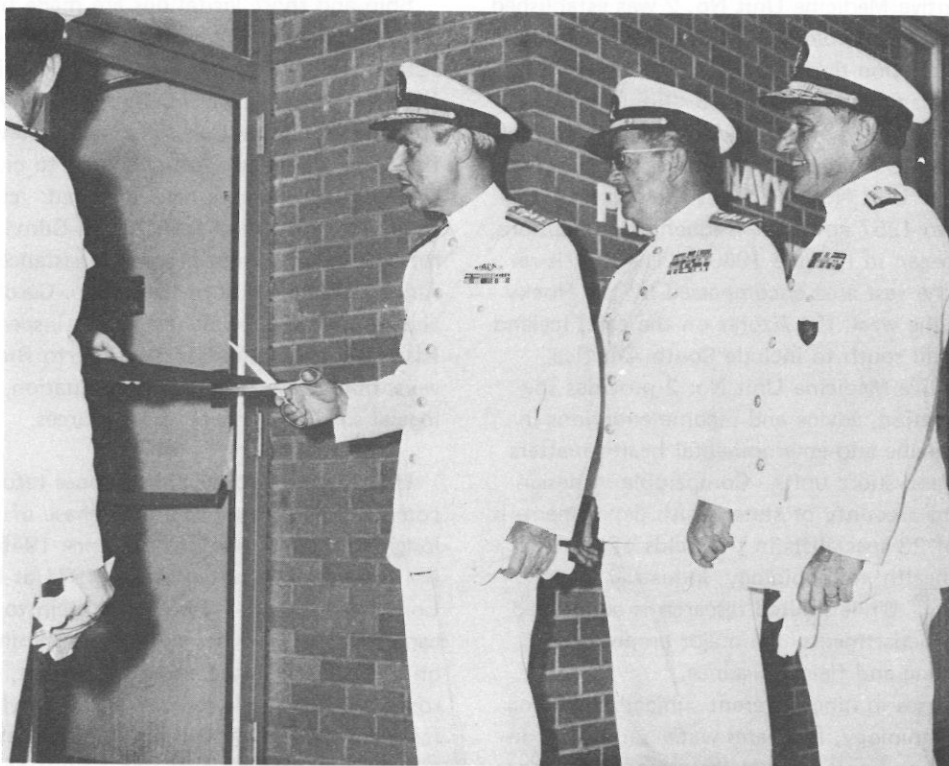
largest of all, the Male Recruit dispensary, where all X-ray, clinical laboratory, emergency room, outpatient sick call and inpatient services are provided.

The new dispensary is located at Boulevard de France and Rykjavik Street, central to all male recruit functions except for the rifle ranges. The building encompasses approximately 40,000 square feet and is completely climate controlled for hot and cold weather.

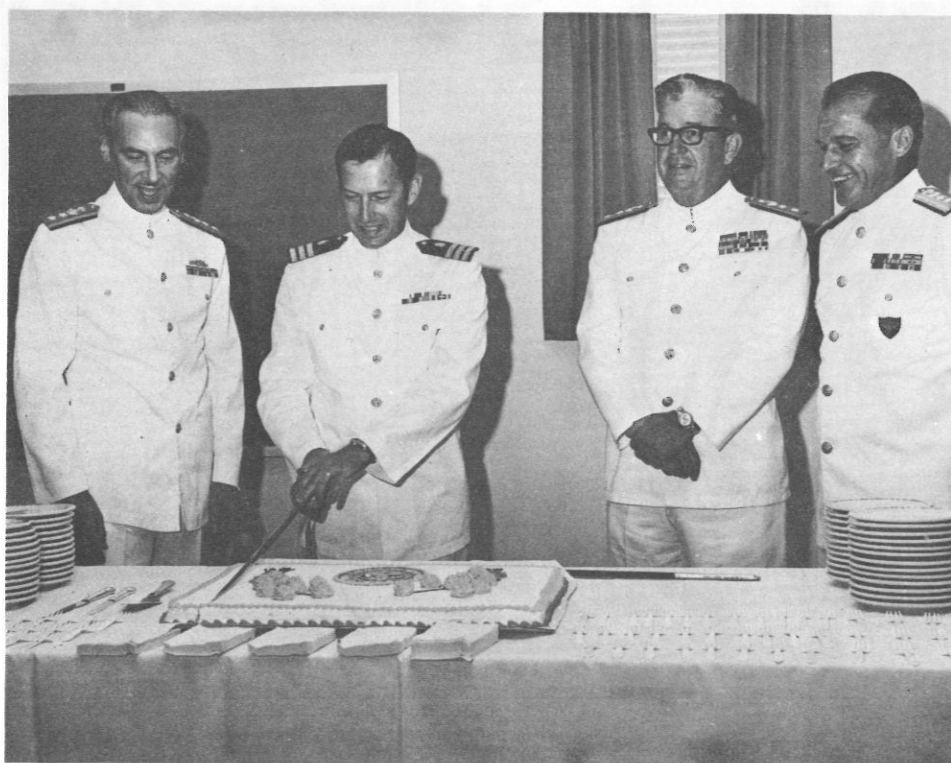
**Navy Preventive Medicine Unit No. 2, Norfolk, Va.,** held a formal opening of its new facilities at the Naval Station Norfolk, on 22 Sept 1970. RADM Joseph L. Yon, MC, USN, Fifth Naval District and Commanding Officer of Naval Hospital Portsmouth, Va., and RADM Herbert G. Stoecklein, MC, USN, Fleet Medical Officer, U.S. Atlantic Fleet, were among the distinguished guests. CDR Eugene J. Clarke, Jr., MC, USN, Officer in Charge of Navy Preventive Medicine Unit No. 2

There are 36 available general service beds (four for isolation), 40 psychiatric beds; authorized bed capacity is 50. The X-ray Dept. is equipped with a 300 M.A. and a 500 M.A. machine. Clinical laboratory facilities include an autocytoimeter, two autodiluters and a Spectronic -20. A "Cool Room" contains an icemaking machine and two bathtubs for ice water immersion treatment of heat stress victims.

welcomed the 60 attendees including CAPT C. H. Miller, MC, USN, Director, Preventive Medicine Division, BUMED and CDR Ralph D. Comer, MC, USN, Tropical Disease Section, BUMED. RADM Ralph E. Faucett, MC, USN, Assistant Chief for Research and Military Medical Specialties, BUMED, delivered the main address at the ceremony. RADM Faucett stressed the need for continued research into the many aspects of preventive medicine.



Ribbon cutting ceremony, Navy Preventive Medicine Unit No. 2 is performed by RADM R. E. Faucett, MC, USN. RADM J. L. Yon, MC, USN (center) and RADM H. G. Stoecklein, MC, USN (right) smile their approval.



Enjoying the cake cutting ceremony are, from left to right: RADM Faucett; CDR E. J. Clarke, Jr., Officer in Charge Navy Preventive Medicine Unit No. 2; RADM Yon, and; RADM Stoecklein.

Navy Preventive Medicine Unit No. 2 was established originally as an Epidemiology Unit in 1942 to combat outbreaks of infection during the early years of World War II. The organization was named "Epidemic Disease Control Unit" in the late 1940's. After expansion of its services in 1952, it became known as "Navy Preventive Medicine Unit No. 2." Plans for the new facility date back to 1957 and after frequent modifications, construction began in the late 1960's. The unit is responsible for the vast area encompassed by the Rocky Mountains on the west, the Azores on the east, Iceland on the north and south to include South America.

Navy Preventive Medicine Unit No. 2 provides specialized consultation, advice and recommendations in preventive medicine and environmental health matters to naval ships and shore units. Comparable in design and function to a county or state health department, it is composed of 23 specialists in the fields of epidemiology, public health, microbiology, industrial hygiene and entomology. While limited research is conducted by all of these departments, the major emphasis is placed on training and field assistance.

Training courses in nine different subjects including shipboard epidemiology, food and water sanitation, industrial hygiene and pest control are presented to more than 3,000 personnel each year.

Ship and shore visitations are made by each department to conduct informal surveys, render technical assistance and advice, and provide on-the-job training. Each year more than 350 ships are visited in numerous areas including Norfolk, Charleston, Newport and New London. Varied services rendered to civilian and naval establishments ashore have included: civilian assistance following hurricane CAMILLE in Biloxi, Miss.; local rubella immunization program assistance; entomological surveys at shore stations from No. Carolina to Maine and Illinois; environmental health inspections at Andros Island, Guantanamo Bay and Puerto Rico; noise surveys; microwave oven safety evaluation, and; bacteriological surveys of local water sources.

**U.S. Naval Hospital Ship Repose** returned from decommissioned status to a new phase of service in her long and distinguished career since 1945, at a dedication ceremony held on 14 Jan 1971 at Naval Station, Long Beach, Calif. Now home again to serve in a new capacity, REPOSE has two of her minimal care wards on D Deck converted to an outpatient, emergency room and fleet sick call center. A newly modernized mess hall and galley will provide the newest scientific advances in hospital nutrition. Existing hospital spaces include: a surgical operating suite, diagnostic radiology



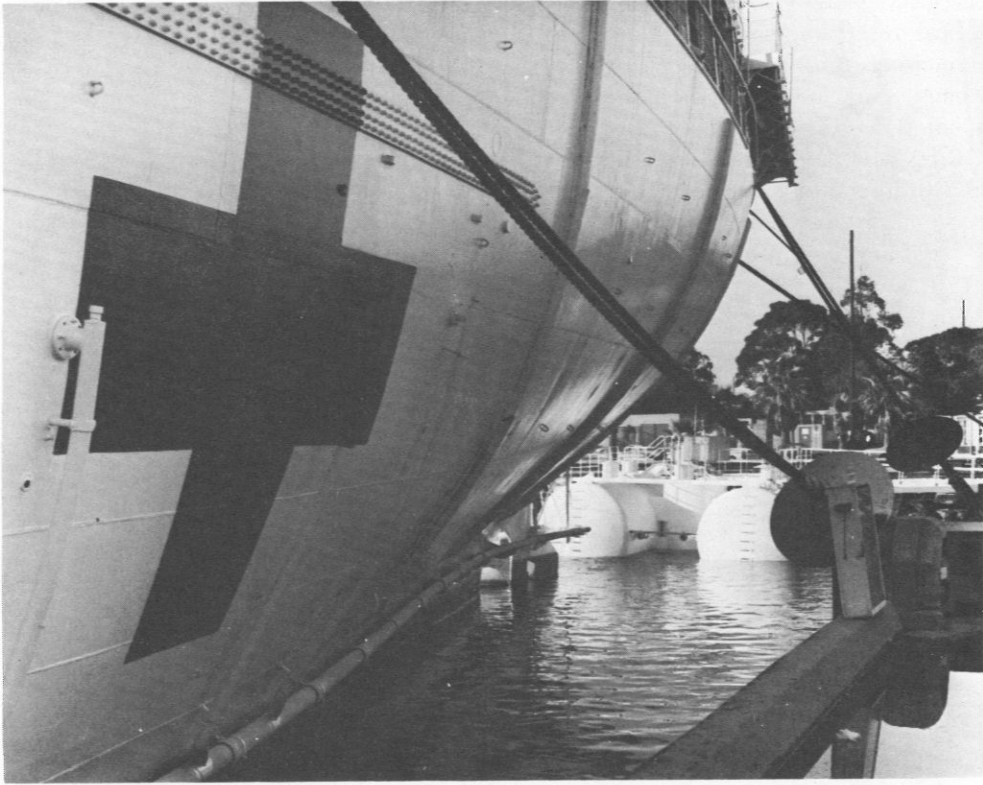
CAPT Charles K. Holloway, MC, USN (with stethoscope about his neck), former CO of Naval Hospital in REPOSE, Sept 1968 to Aug 1969, is shown examining patients off the coast of Vietnam, with CDR (now CAPT) Fred O'Connell, MC, USN.



Dedication of Hospital Annex "REPOSE" at Naval Station Long Beach, Calif., 14 Jan 1971.







New ship-to-shore sewer line helps to control harbor pollution with a zero pollution system.



department, pharmacy, blood bank, clinical laboratory, and clinical services in surgery, orthopedics, medicine, dermatology, urology, eye, ear, nose and throat.

REPOSE has complete support facilities including: elevators, barber shop, Navy Exchange store, Chaplain, American Red Cross, a library, and television sets on the wards. REPOSE proudly returns to its life-long mission of service and medical support for the fleet, the men and women of our Armed Forces and our retired members.

Although not in commission, REPOSE will operate with 200 beds of her 750 capacity as an in-service in-reserve satellite extension of Naval Hospital, Long Beach, until a 220-bed addition there can be completed.

CAPT Charles K. Holloway, MC, USN, now Commanding Officer Naval Hospital Long Beach, Calif., formerly had served as CO Naval Hospital in REPOSE during the ship's commissioned service in the South China Sea, Sept 1968 - Aug 1969.

The Navy completed a significant marine engineering achievement in the control of Long Beach harbor and dockside pollution. For the first time in the Navy a hospital ship has been equipped to transfer all of its overboard sewage discharge into the Terminal Island sewer system and avoid contamination of the harbor water. REPOSE, at Pier Seven, Naval Station Long Beach, Calif., joins the S.S. Queen Mary, S.S. Princess Louise, and many other permanently located dockside vessels on the west coast in being connected for zero pollution.

The first anniversary of the opening of the **Djakarta detachment, U.S. Naval Medical Research Unit No. 2 in Taipei, Taiwan**, was celebrated quietly in Jan 1971. Commanding Officer CAPT R.H. Watten, MC, USN, noted that despite restrictions imposed by the rainy season and cramped quarters of the temporary laboratory, the work there had progressed remarkably.

Well under way is the large-scale zoonosis project which has taken teams from the detachment into the far reaches of Java and resulted in the accumulation of considerable data on the mammalian fauna of Java, and the diseases they harbor.

A study of dengue fever in the Djakarta area is progressing with the collection of clinical information, serum specimens for antibodies, and blood for virus isolation. An ambitious program of mosquito trapping and identification with subsequent attempts at virus isolation from mosquito pools has kept investigators busy.

The Medical Ecology Department in collaboration with the detachment, the Ministry of Health, and the

University of Indonesia, has carried out several field studies of human filariasis in Java and Sulawesi. The distribution and incidence of this disease are being mapped and further investigations are planned in the Muloccas and the lesser Sunda Islands east of Java.

In addition to pursuing its scientific mission, the detachment staff has assisted the medical unit at the Embassy with laboratory examinations and recently conducted a rabies vaccination program for the pets of American personnel in Djakarta. Valuable assistance on pest control has been provided by the Medical Ecology Department and the availability of the joint DLG-NAMRU-2 airlift has made dental care available for Americans in Djakarta provided by the U.S. Naval Dental Clinic from Headquarters Support Activity, Taipei.

Effective 1 Jan 1971, the medical facilities at **Roosevelt Roads Naval Station** were redesignated as a **Naval Hospital** by the Secretary of the Navy. CAPT Peter F. Wells, MC, USN was named the first Commanding Officer of the new hospital command which



RADM N. G. Ward, USN, (left), greets VADM Davis, Surgeon General (right).



Naval Hospital Roosevelt Roads, ceremony.





occupies present medical facilities at Roosevelt Roads, P.R., but will be re-located to the new \$7 million hospital now under construction there. Participating in a brief ceremony held in front of the present hospital, were VADM George M. Davis, MC, USN, Surgeon General, and RADM Norvell G. Ward, USN, Commandant of the TENTH Naval District.

CAPT Charles C. Muehe, MC, USN, assumed command of **Naval Hospital Boston, Chelsea, Mass.**, on 31 March 1971. CAPT Muehe reported aboard Naval Hospital Boston in Sept 1969 as Executive Officer. He is a certified member of the American College of Orthopedic Surgery and a Diplomate of the American Association of Orthopedic Surgeons. He relieved CAPT Arthur R. Errion, MC, USN (Ret) who had been in command since 29 Aug 1969. Retiring after 28 years of naval service, CAPT Errion joined the medical department of the



CAPT Charles C. Muehe, MC, USN



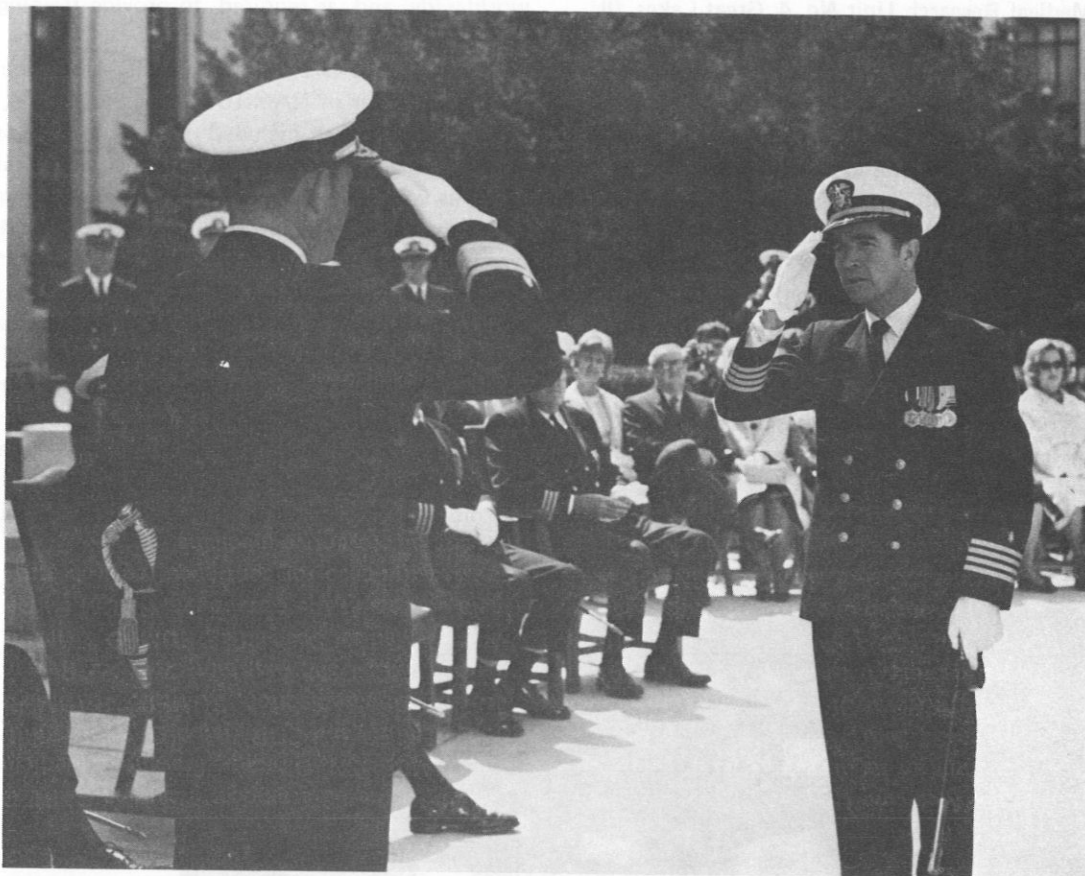
CAPT Arthur R. Errion, MC, USN (Ret)

John Hancock Life Insurance Company in Boston, Mass. He and Mrs. Errion will reside in Salem, Mass.

**Naval Medical School, NNMC, Bethesda, Md.**, was the scene of an impressive change of command ceremony on 9 Apr 1971. RADM Charles L. Waite, MC, USN, Board certified in Pediatrics, a Fellow of the American Academy of Pediatrics, a Fellow of the American College of Physicians, and a qualified Submarine Medical Officer, now serves on the staff of the Commander in Chief of the Pacific Fleet as Fleet Surgeon, at Pearl Harbor. He was relieved of duty as CO Naval Medical School by CAPT Edward J. Rupnik, MC, USN, Board certified in Surgery, a member of the American College of Surgeons and a member of the A.C.S. Committee on Graduate Medical Education. CAPT Rupnik holds an academic appointment as Clinical Professor of Surgery at Georgetown University.







RADM Charles L. Waite, MC, USN




CAPT Edward J. Rupnik, MC, USN

**Naval Medical Research Unit No. 4, Great Lakes, Ill.,** celebrated its 25th anniversary on 3-4 June 1971 with a symposium, "Prospectives for Control of Acute Respiratory and Meningococcal Diseases."


NAMRU-4 is one of 13 medical research activities within the framework of the Medical Department of the U.S. Navy. Originally commissioned 31 May 1946, as the McIntire Research Unit for Rheumatic Fever, Dublin, Ga., the Unit was officially re-established at Great Lakes as NAMRU-4 on 4 June 1948, continuing its research on rheumatic fever as well as studying the etiology, prevention and control of acute respiratory diseases as they affected naval recruits. The present mission of the Unit is to conduct basic research in the biomedical sciences, provide essential information on diseases and medical problems of military significance, recommend control measures for communicable diseases that are endemic or epidemic to specific areas

world-wide, and, as required, to provide training in research techniques.

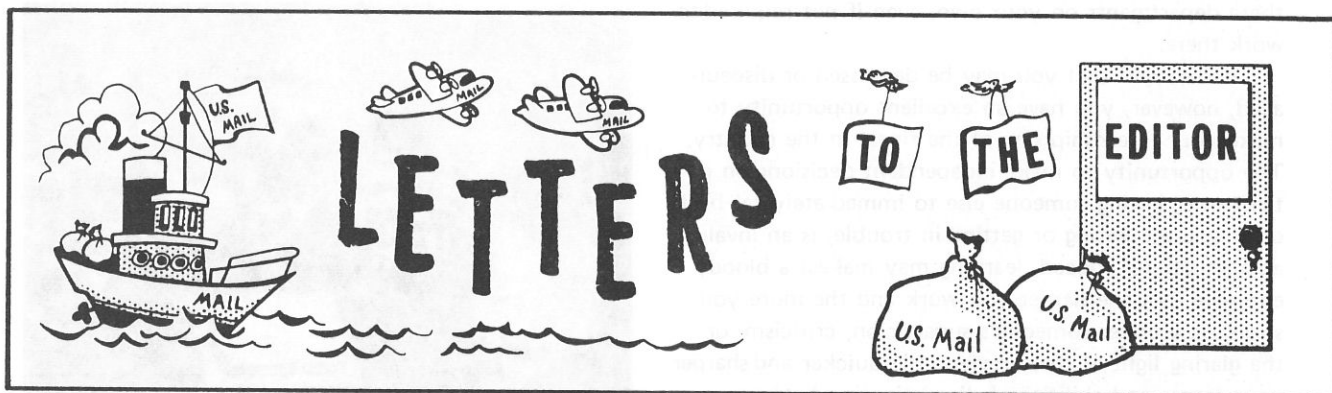
CAPT Robert O. Peckinpaugh, MC, USN, the Commanding Officer of NAMRU-4 since June 1964, hosted the activities, which included research reports on streptococcal, meningococcal, mycoplasmal, and viral diseases, as well as new vaccines and antiviral compounds.

On the evening of June 3rd, an anniversary dinner was held for NAMRU-4 staff, symposium participants, attendees, and invited guests. RADM Frank T. Norris, MC, USN, Assistant Chief for Personnel and Professional Operations, BUMED, delivered an after dinner address. A highlight of the evening was the famed Bluejacket Choir singing religious, patriotic and traditional selections. The Bluejacket Choir is a celebrated choral group composed of recruits and Service School personnel of the Naval Training Center, Great Lakes, Ill. 



Navy nurses at Dodger Stadium, May 25, 1971 (from left to right): LT Roseanne Sobkow of Cedar Run, N.J., from the Long Beach Naval Hospital; LT Hazel Hunter of Calgary, Alberta, Canada; and LCDR Ella Marble of Imperial, Neb., both from the hospital ship, USS Repose, based at Long Beach, Calif. 





*The following letter was addressed by the author to the interns at the Naval Hospital, Camp Pendleton, Calif., where Dr. Tiller interned in 1967-68. Though originally intended as personal correspondence, we were immediately struck by the value of this friendly gesture toward all interns everywhere. Accordingly permission was sought to reproduce the letter here, at least in part. Dr. Tiller has graciously consented to share the letter with our readers. We are grateful to CAPT George M. Ricketson, MC, USN, CO Nav Hosp Camp Pendleton, for directing our attention to this unusual correspondence.*

Dear Physicians,

This letter reflects a view through the retrospectroscope, and constitutes an effort on my part to suggest how you might make your internship a more valuable experience. My viewpoint is that of a G.P. who recently completed his military service.

By way of introduction, I completed the Rotating Internship (two months of Pediatrics, two months of Obstetrics, four months of Surgery and four months of Internal Medicine) during 1967-68 at the Naval Hospital, Camp Pendleton, Calif. Subsequently, I spent two months in a Dermatology Clinic and six months at the School of Aviation Medicine at Pensacola, Fla. The subsequent one-and-a-half years were served on duty at NAS Alameda, Calif. In September 1970, I was released from active duty and commenced the private practice of medicine in an established office at Wichita, Kansas. The following comments indicate my present attitude concerning internship, and how I could have made it more valuable. Perhaps these remarks will be of benefit.

First, the acquisition of the RIGHT MENTAL ATTITUDE was probably the hardest and the most elusive goal of the internship. As far as I am concerned, the right mental attitude should be: "I will not let the volume of routine work (histories, physicals, type and cross match reading, IV's, Saturday afternoon

emergency room duty) stand in the way of acquiring a good medical education." The absence of residents and permanent staff places the responsibility for education during internship directly on your shoulders — teaching may be an ancillary activity. I exhort, cajole, and commend all of you to develop a very "hard nosed" attitude in your acquisition of knowledge. If the "staff" men tend to gloss over large or small items that you feel are of teaching significance to you, do not hesitate to stop them. Request discussion, explanation, elaboration and interpretation. Pursue the matter — and don't be put off.

Secondly, as a result of developing the right mental attitude, the surgical phase of the internship can be extremely valuable. I did more surgery in four months than many first-year surgery residents accomplish. Be eager and aggressive in acquiring surgical experience. Fortunately I kept all of my surgery dictations, and mainly on the basis of these reports, have been granted surgical privileges for appendectomy, hemorrhoidectomy, breast biopsy, inguinal herniorrhaphy, vein ligation and stripping, and other minor procedures. I strongly recommend that you energetically seek and acquire surgical responsibility and experience — and save your operative reports.

Thirdly, I suspect that I was too timid in performing pelvic examinations. The ability to perform a thorough, complete bimanual examination is of utmost importance. This may in fact constitute the single most important examination in physical diagnosis. In retrospect, I would not hesitate to seek adequate information by deep palpation and absolute (though gentle) definition of normal and abnormal female pelvic anatomy.

Fourthly, I would urge that you recognize the importance of "coronary care." Maintain a coronary care protocol; institute one yourself if necessary; memorize it and practice it. I found my intern experience left me somewhat inadequate in the coronary care and emergency room areas. Don't hesitate to frequent



these departments on your own, even if not required to work there.

I understand that you may be depressed or discouraged, however, you have an excellent opportunity to make your internship one of the finest in the country. The opportunity to make independent decisions on patient care, having someone else to immediately fall back on if you are wrong or getting in trouble, is an invaluable situation. Indeed, learning may make a bloody entrance, but the harder you work and the more you sweat now under someone's supervision, criticism, or the glaring light of daily review, the quicker and sharper your senses and abilities of discrimination between trivia and importance, will become.

Furthermore, I am familiar with several postgraduate programs. By seeing the numbers of patients that you are presently seeing, you are in many areas getting better training and education for general practice in one year than some residents are getting in two years. There is absolutely no question about it as far as I am concerned; the number of patients that you see is directly related to the ease and equanimity with which you handle and manage patients in the future. A paucity of patients is a great foundation for a paucity of knowledge. I urge you to see every patient that comes into the hospital — those on and even off your service. Something of value for future reference can be learned from every patient. Do not overlook the ENT, ophthalmology and dermatology outpatient clinics. Spare time should be spent "picking the brains" of the physicians in those clinics, not in the bar, the swimming pool, on the golf course or on the handball court — where I spent a good deal of time.

If you are in Wichita, Kansas, I invite you to visit my office and stay at my home.

Sincerely and with best interests at heart,

George R. Tiller, M.D.  
Intern Class '67-'68  
5101 East Kellogg  
Wichita, Kansas 67218

*To the Editor:* If the photograph was substandard — it's all in the best "Navy Tradition" (see enclosed photos) — the celebration of the 100th Anniversary of the U.S. Navy Medical Corps at Ogdensburg's (N.Y.) Naval Reserve Training Facility was superb!

During "the second break" in the evening's class work, all hands had coffee and cake — a special cake — honoring the Medical Corps' 100th Birthday.

At evening quarters the Medical Officer of the unit gave a resumé of the Navy Medical Corps' history and present structure in the Naval establishment.

We, in our small unit, are proud of the Navy and its



The Medical Department USNRTF, Ogdensburg, N.Y. Standing in front row, left to right, are: HM3 D. Wells, HMC C.W. Ward, HM3 C.A. Ward, and DT3 T.P. Ward. Standing in back row, left to right, are: LCDR C.F. Negus, DC; HM3 T.A. Hunst, and; CDR D. A. Patriquin, MC.



The USNRTF at Ogdensburg, N.Y. celebrated the 100th Medical Corps Birthday in style. Cutting the birthday cake are: CDR D.A. Patriquin, MC, USNR-R (left) and LCDR C. Negus, DC, USNR-R (right).

tradition of service. (We find the Medical Corps the best means of contributing to the tradition.)

We have our own local traditions, too. For instance, Chief Hospitalman Charles W. Ward and his three sons are all in our Reserve Unit; sons "Skip" (HM3 Charles A. Ward), "Ted" (DT3 Theodore Patrick Ward) and "Gerry" (Gerald Steven Ward), who is scheduled for Dental "A" School, are a large part of our medical contingent.

Our dentist Charles Negus, LCDR, DC, USNR-R drives from Massena (70 miles round trip) weekly; our medical officer David Patriquin, CDR, MC, USNR-R drives from Montreal, Canada (250 miles round trip) weekly.

The dedication of our own Medical Department is small beside the great deeds of many other units over the past 100 years. We have our own job to do and we do it — in the best Navy Tradition.

Sincerely,

CDR David A. Patriquin, MC, USNR-R  
Zeller Osteopathic Center  
Suite 126  
3545 Cote Des Neiges Road  
Montreal 109

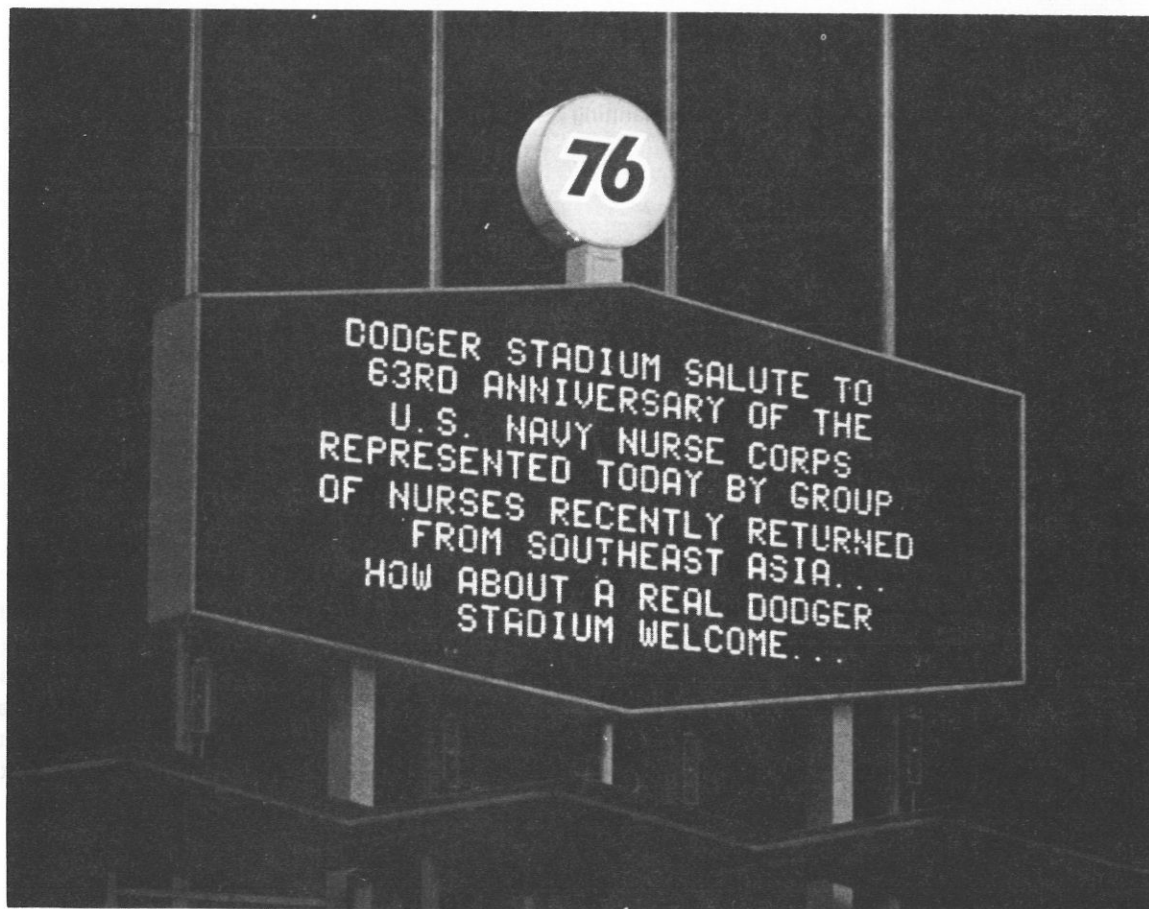
*To the Editor:* The article on the Command and Staff Seminar in the May issue was most interesting.

Such a Seminar for the Reserve Medical Officer would be extremely valuable. I believe there is a need to look beyond his routine training duties and provide an introduction to the overview of administration of Navy Medicine. This would be most useful to the newly selected Captain.

Might I suggest that consideration be given to inviting the Reserve Captain to attend such meetings, or to present a Seminar especially for the Reserve Medical Officer?

May I add a request for two copies of the May issue that I might give to two Senior Student Nurses at our Hospital who are being commissioned in the Navy this summer?

CAPT Charles J. Brink, MC, USNR-R  
116 Belmont Street  
Worcester, Mass. 01605



The Dodger Stadium scoreboard lights up a salute to the Navy Nurse Corps during the Dodgers-Giants game in Los Angeles, May 25, 1971.—Navy Recruiting Station, Wilshire Blvd., Los Angeles, Calif. (Photo by PH1 John W. Rogers, USN).



## NAVAL DENTAL CORPS CONTINUING EDUCATION PROGRAM

The Continuing Education Courses conducted at the Naval Dental School, National Naval Medical Center,

Bethesda, Md., and the Naval Dental Center, San Diego, Calif., are scheduled during Fiscal Year 1972 as follows:

### Naval Dental School, Bethesda, Md.

<i>Courses</i>	<i>Dates</i>
Oral Diagnosis and Treatment Planning	13-17 September 1971
Occlusion	4-8 October 1971
Operative Dentistry	18-22 October 1971
Oral Surgery	15-19 November 1971
Endodontics	6-10 December 1971
Oral Pathology	3-7 January 1972
Prosthodontics: Removable Partial Dentures	17-21 January 1972
Preventive Dentistry	14-18 February 1972
Prosthodontics: Fixed Partial Dentures	6-10 March 1972
Prosthodontics: Complete Dentures	27-31 March 1972
Periodontics	17-21 April 1972
Prosthodontics: Maxillofacial Prosthetics	8-12 May 1972
Management Seminar*	22-26 May 1972

\*Limited to 20 active duty naval dental officers with the rank of senior commander or junior captain.

Quotas have been assigned to District and Staff dental officers for career dental officers, and Reserve dental officers on active duty, on a space available basis. District Commandants have likewise been assigned quotas for eligible inactive Naval Reserve Dental officers.

For courses at the Naval Dental School, applications from career officers and Reserve officers on active duty

are to be submitted via the chain of command and in accordance with current directives, to the Chief, Bureau of Medicine and Surgery (Code 611), Navy Department, Washington, D.C. 20390, using the format shown in MANMED article 6-130. Active status Naval Reserve dental officers on inactive duty will apply to their District Commandant via the Director of Dental Activities or the District Dental Officer, as applicable.

### Naval Dental Center, San Diego, Calif.

<i>Courses</i>	<i>Dates</i>
Removable Partial Dentures	13-15 September 1971
Fixed Partial Dentures	4-6 October 1971
Endodontics	18-20 October 1971

# Naval Dental Center, San Diego, Calif. (Con.)

<i>Courses</i>	<i>Dates</i>
Operative Dentistry	18-20 November 1971
Occlusion	6-8 December 1971
Oral Diagnosis	10-12 January 1972
Complete Diagnosis	31 January - 2 February 1972
Maxillofacial Prosthetics	28 February - 1 March 1972
Oral Surgery	13-15 March 1972
Preventive Dentistry	3-5 April 1972
Periodontics	15-17 May 1972

For courses at the Naval Dental Center, San Diego, Calif., career dental officers and Reserve dental officers on active duty should submit their applications via the chain of command and in accordance with current directives to the Commandant, Eleventh Naval District (Code 37), San Diego, Calif. 92132, using the format contained in MANMED article 6-130. Active status Naval Reserve dental officers on inactive duty will

apply to the Commandant of the district in which they reside.

Application should be submitted so as to be received at least one month prior to the convening date of the course. Officers will be notified regarding the action taken on their requests. Those approved will be nominated for TAD, authorization orders, or active duty for training, as appropriate. ☸

## INDOCTRINATION COURSE

The Surgeon General is sponsoring a special indoctrination course for selected first active duty medical and dental officers at the Armed Forces Staff College, Norfolk, Va., during the period 7-23 July, 1971. RADM H.G. Stoecklein, MC, USN, Fleet Medical Officer, U.S. Atlantic Fleet, has been designated as the Course Director. The class will be comprised of first active duty medical officers being assigned to sea billets on the east coast, shore billets in the Norfolk area, and first active duty dental officers going to a variety of assignments. The total number in the class is expected to be close to 150.

Of the projected number 150, 50 will be dental officers slated for a variety of assignments. Approximately 60 of the medical officers will go to sea, and 40 will proceed to shore activities.

For the past several years, two formal courses of indoctrination for first active duty medical officers have been held simultaneously during the first three weeks of July at Naval Schools Command, Newport, R.I., and at the Amphibious Training Command, Pacific, Coronado, Calif.

By moving the east coast course to the Norfolk area, it will now be possible to provide adequate off-base and BOQ accommodations in addition to the facilities of the Armed Forces Staff College. Under RADM J. Yon, MC, USN, Commanding Officer, much of the clerical and administrative support required for the course will be provided by the Naval Hospital, Portsmouth, Va.

The Coronado course will be conducted at the same time, but will be attended by approximately 65 first active duty medical officers who will proceed to CINCPACFLT activities for their assigned duties.

Including medical officers that will be assigned to shore activities for their first active duty, in the Norfolk area, is an innovation. Particularly fortuitous is the Regionalization concept of medical care delivery currently being tried and studied in the Tidewater region. Participating in the indoctrination course will be lecturers from: BUMED; the Naval Academy; the Naval Hospital Portsmouth, Va.; Norfolk-based commands, and; several BUMED field activities such as the Naval Medical Research Institute (NMRI), and the Naval School of Health Care Administration (NSHCA). ☸

## BUMED NOTICE 1520

From: Chief, Bureau of Medicine and Surgery  
 To: Ships and Stations Having Medical Corps Personnel  
 Subj: FY 1973 Residency/Fellowship Training Programs; announcement of  
 Ref: (a) BUMEDINST 1520.10E  
 Encl: (1) Listing of Inservice Medical Residency/Fellowship Training Positions

1. *Purpose.* To announce the availability of medical residency and fellowship training programs.



## 2. Background

a. *Inservice Programs.* Fully accredited residency training programs are conducted at naval hospitals in 18 separate specialties. Five subspecialty medical fellowship training programs are also conducted at naval hospitals. Enclosure (1) provides a current listing of these programs and their respective geographical locations.

b. *Outservice Programs.* A limited number of positions are available to sponsor Navy Medical Corps officers for specialty or subspecialty training in civilian institutions. Outservice training is utilized to provide

required training in those specialties where no inservice training program is available.

3. *Application.* Interested Medical Corps officers are invited to apply for the specific training program they desire. The application deadline for programs which will commence during Fiscal Year 1973 is 1 September 1971. Procedures for preparing and submitting requests are contained in reference (a).

4. *Notification.* Medical Corps officers applying for FY 1973 medical residency and fellowship training programs will be notified of the action taken on their requests during November 1971.

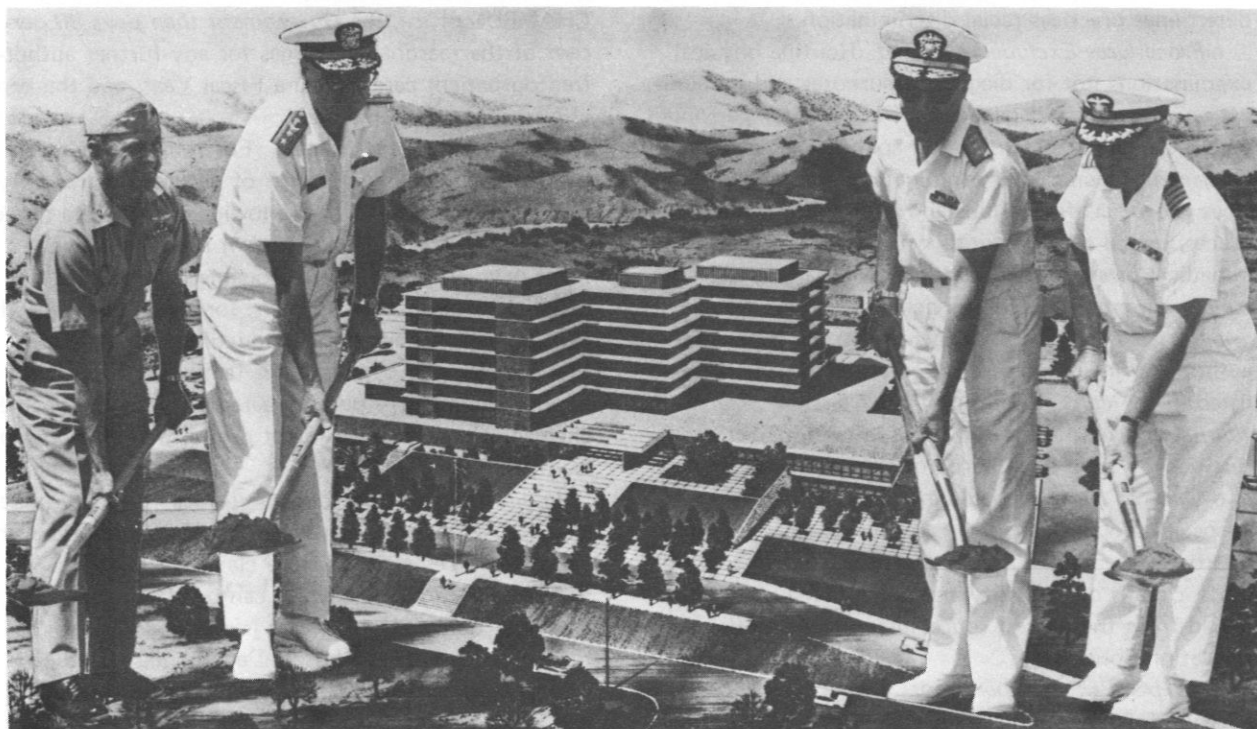
RESIDENCIES/FELLOWSHIPS IN NAVAL ACTIVITIES

Specialty	Years of training offered	Number of positions each year	ACTIVITIES									
			Bethesda	Boston	Great Lakes	Oakland	Philadelphia	San Diego	Camp Pend.	Ptsmth. Va.	Jax. Fla.	Other
Aerospace Medicine	3	6	-	-	-	-	-	-	-	-	-	6
Anesthesiology	3	20	4	3	-	3	3	5	-	2	-	-
Cardiovascular Disease	2	5	2	-	-	-	1	2	-	-	-	-
Dermatology	3	7	-	-	-	-	3	4	-	-	-	-
Endocrinology & Metabolism	2	1	-	-	-	1	-	-	-	-	-	-
Family Practice (GP)	2	6	-	-	-	-	-	-	2	-	4	-
Gastroenterology	2	2	1	-	-	-	1	-	-	-	-	-
Hematology	2	2	1	-	-	-	1	-	-	-	-	-
Internal Medicine	3	37	6	3	4	4	6	8	-	6	-	-
Neurosurgery	5	2	-	-	-	-	-	2	-	-	-	-
Neurology	3	2	2	-	-	-	-	-	-	-	-	-
Obstetrics/Gynecology	3	17	2	1	2	2	2	4	-	4	-	-
Occupational Medicine	3	1	-	-	-	-	-	-	-	-	-	1
Ophthalmology	3	9	3	-	-	2	1	3	-	-	-	-
Orthopedics	4	16	2	2	-	3	2	4	-	3	-	-
Otolaryngology	4	9	2	-	-	2	1	4	-	-	-	-
Pathology	4	7	2	-	-	1	-	3	-	1	-	-
Pediatrics	3	17	3	2	-	2	2	5	-	3	-	-
Plastic Surgery	2	1	1	-	-	-	-	-	-	-	-	-
Preventive Medicine (General)	3	1	-	-	-	-	-	-	-	-	-	1
Psychiatry	3	11	4	-	-	3	4	-	-	-	-	-
Pulmonary Disease	2	2	1	-	-	-	-	1	-	-	-	-
Radiology	3	14	4	-	-	2	3	5	-	-	-	-
Surgery	4	18	2	2	2	2	2	4	-	4	-	-
Thoracic & CV Surgery	2	3	1	-	-	-	-	2	-	-	-	-
Urology	4	7	1	-	-	1	1	2	-	2	-	-
<b>Totals</b>		<b>223</b>	<b>44</b>	<b>13</b>	<b>8</b>	<b>28</b>	<b>33</b>	<b>58</b>	<b>2</b>	<b>25</b>	<b>4</b>	<b>8</b>

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## GROUNDBREAKING, NAVAL HOSPITAL CAMP PENDLETON



Six shovelfuls of earth were turned to mark the beginning of construction for the new nine-story, 600-bed hospital at Camp Pendleton during Groundbreaking Ceremonies held at the Naval Hospital on May 13th. Participating in the ceremony were, from left to right: MGEN George S. Bowman Jr., USMC, Camp Pendleton Base Commander; RADM John W. Albright, MC, USN, Deputy Chief, Bureau of Medicine and Surgery; RADM

Horace D. Warden, MC, USN, 11th Naval District Medical Officer and Commanding Officer of the Naval Hospital San Diego; and CAPT George M. Ricketson, MC, USN, Commanding Officer of the Naval Hospital, Camp Pendleton.

An artist conception of the new hospital is shown in the background.—Photo by HM1 M.R. Villaroman, Jr. Courtesy of PAO, Nav Hosp Camp Pendleton, Calif. 🇺🇸

## CHAMPUS (CIVILIAN HEALTH AND MEDICAL PROGRAM OF THE UNIFORMED SERVICES)

*How does CHAMPUS benefit the serviceman and his family?*

1. **General:** The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) is a comprehensive hospital and medical health benefits program which services:

- o-dependents of active duty personnel,
- o-qualified retired members and their dependents,\*
- o-dependents of deceased active duty and retired personnel.\*

\*Medical care under CHAMPUS ends when at age 65 dependents become eligible for the Medicare program of Social Security. Exceptions: If the sponsor is still on active duty when the dependent reaches age 65, or if the dependent is not eligible for Medicare. In these cases, CHAMPUS eligibility and care continues.

Under CHAMPUS, *eligible persons* can obtain treatment at civilian medical facilities — if treatment at a military medical facility is not available or convenient — and *share the cost* of the health care with the Government.

Since CHAMPUS is a *worldwide program*, all persons eligible should be familiar with its benefits. In particular, active duty personnel who may be sent overseas on unaccompanied tours must make certain that their dependents understand CHAMPUS.

2. **Care Authorized Under CHAMPUS:** Any procedure or type of care that is generally accepted as being part of good medical practice *other than those excluded by law* is authorized under CHAMPUS.

However, no payments may be made for care provided by a medical facility which the Department of Defense determines practices racial discrimination.

*o-Procedures Excluded by Law:* Routine physical examinations not for diagnostic purposes and immunizations *except* for dependents of active duty personnel who are on orders to join their sponsor overseas; well-baby care; spectacles or examinations; prosthetic devices *except* artificial limbs and eyes and orthopedic braces; dental care *except* as necessary in treatment of a medical or surgical condition other than dental; domiciliary care; chiropractic services.

*o-Christian Science Treatment:* Certain services are authorized, including care by practitioners and nurses listed in the current edition of the *Christian Science Journal* and hospitalization in a sanitarium operated or certified by the First Church of Christ, Boston.

*o-Care for Handicapped and Retarded Dependents:* A special program covering care for handicapped and retarded dependents of active duty personnel is authorized. Details of eligibility and benefits may be obtained from the nearest source listed below under "Information Sources."

3. *CHAMPUS In Operation:* Certain procedures must be followed by persons eligible to use CHAMPUS. These include-

*o-Identification:* Eligible persons 10 years of age or older must present a valid uniformed services identification card; children under 10 use a parent's identification card.

*o-Nonavailability Statement:* Except in *emergencies* or during a period of temporary absence from the sponsor's household, *dependents of active duty personnel* must obtain a nonavailability of space from the commander of the nearest Armed Forces medical facility before applying for hospitalization in a civilian facility. *Retired members, their dependents, and dependents of deceased active duty or retired members DO NOT NEED* such a statement.

A nonavailability statement is NEVER REQUIRED for *outpatient care*. This means that all eligible persons may use either Armed Forces medical facilities or civilian medical facilities for outpatient care.

*o-Cost-Sharing:* Under CHAMPUS the Government pays certain specified shares of *reasonable charges for authorized health benefits*.

*-Dependents of Active Duty Personnel:* For *inpatient care*, the beneficiary pays the first \$25 of the hospital charge, or \$1.75 per day, whichever is greater; the Government pays the remainder of reasonable charges made by a hospital and/or medical personnel. For *outpatient care* the beneficiary pays the first \$50 of each dependent's medical care in a Fiscal Year, but

never more than \$100 deductible for his dependents. After the required deductible is established with a CHAMPUS office, the *Government then pays 80 percent* of the reasonable charges for any further authorized outpatient care during a Fiscal Year, and the beneficiary pays the remainder.

*-All Other Beneficiaries:* For retirees, their dependents, and the dependents of deceased active duty and retired personnel, the following cost-sharing procedures are in effect: For *inpatient care*, the Government pays 75 percent of reasonable charges, and the beneficiary pays the remainder; for *outpatient care*, the beneficiary pays an annual deductible charge — the first \$50 for one person in the family or the \$100 family maximum — plus 25 percent of the reasonable charges, with the Government paying the *remainder of reasonable charges*.

In all instances, "*reasonable charges*" are determined by a CHAMPUS payment office or the appropriate uniformed services office when a claim is submitted.

*Inpatient care cost sharing* can be affected by the length of time for which care is required and by the time elapsing between hospital admissions. Detailed information can be obtained from agencies listed below under "Information Sources."

The Government's share of reasonable payments under CHAMPUS may be made to the beneficiary if that *individual has paid the entire medical bill* or to the hospital or doctor submitting a bill direct to a CHAMPUS payment office.

4. *Information Sources:* Additional information about participation in CHAMPUS or cost-sharing payments may be obtained from-

- o-The nearest Armed Forces installation.
- o-OCHAMPUS, Denver, Colorado 80240.
- o-OCHAMPUSEUR, USA Medical Command, Europe, APO New York 09403.
- o-The major overseas command, except in areas under OCHAMPUSEUR.
- o-The Surgeon General of the Army, Washington, D.C. 20314.
- o-The Surgeon General of the Navy, Washington, D.C. 20390.
- o-The Surgeon General of the Air Force, Washington, D.C. 20330.
- o-The Chief Medical Officer, Hq. U.S. Coast Guard, Washington, D.C. 20591.—DOD Information Guidance Series No. 8A-3, May 1971.

Joint Regulation "Medical Services, Uniformed Services Health Benefits Program," September 1970: Army Regulation 40-121; SecNavInst. 6320.8D; Air Force Regulation 168-9; PHS General Circular No. 6; CG ComdtInst. 6320-2B; ESSA CO-4.



"Uniformed Services Health Benefits Program, Revised," May 1969, DOD PA-3B; DA PAM 360-505; NAVPERS 15203B; AFP 168-1; NAVMC 2601; CG-144; PHS-CCPM Pam 16; ESSA CO-3 (Rev. 69). ☛

### VOLUNTEER WORK

Earlier this year the Chief of Naval Operations expressed interest in the possible voluntary participation of Medical Department personnel in MEDCAP team-type projects to provide medical care to civilian personnel living in ghetto or deprived areas. It was felt that some of our medical and paramedical personnel might be willing to devote a portion of their off-duty time to such a worthy cause.

BUMED approves this form of humanitarian service for it personifies the image that medicine has perpetuated over the years. Medical Department personnel willing to voluntarily indulge in this type of off-duty endeavor might benefit from a knowledge of some of the facts that have been learned in discussions with District of Columbia public health officials — facts which may be applicable to many localities throughout the country.

The District of Columbia, for example, has volunteer worker legislation which obviates the requirement for a physician to have a D.C. license under these circumstances as long as he has a valid license in another state and works under the auspices of the District Public Health Office. However, there is no malpractice coverage under the legislation. In addition, D.C. officials contend that for any project to be meaningful it should be carried out in conjunction with an on-going clinic or service that now has established hours of service, which makes it difficult to fit in after hours and weekend volunteer participation.

The foregoing is presented not to discourage anyone from volunteering his services but to present some of the problems that may be encountered. They serve as an indication that all facets of such voluntary involvement should be investigated and carried out in consonance with existing, established community programs.

The Chief of Naval Operations and the Surgeon General are vitally interested in community affairs and strongly support any worthwhile endeavor such as described above. If your activity or any of your personnel are engaging in such community projects, please let the Bureau know so that recognition can be given when appropriate. It is further suggested that medical staffs be made aware of this policy and encouraged to participate when the voluntary service does not interfere with normal and expected duties. ☛

### TAX WITHHELD MAY BE SHORT

Some service people may find the Federal tax withheld from their wages will not cover their income tax liability due to a new law changing the withholding system.

An unexpected large balance of taxes due at the end of the year could primarily affect big single wage earners, those who "moonlight" or those families where the wife works.

Especially affected are:

—Each employee who expects to earn more than \$11,500 in 1971 and expects to claim the \$1,500 standard deduction or itemize deductions totaling less than 13 percent of his salary;

—Each single employee who expects to earn \$15,000 or more in 1971;

—Each married employee who expects to earn \$25,000 or more in 1971 whose spouse is not employed;

—All working couples.

In order to help employees in estimating their 1971 tax liability, payroll offices have been issued copies of the 1971 income tax rates and tables.

If you find that you need more withholding, you should file a new exemption certificate (Form W-4) with your employer and claim fewer exemptions or ask for additional dollar amounts of withholding.

If you prefer, you may make installment payments to the Internal Revenue Service on a Declaration of Estimated Tax (Form 1040ES).

The 1971 rates and tables are different from the 1970 rates and tables which were used for preparing the 1970 income tax return.—Washington (AFPS). ☛

### AVIATION MEDICAL RESEARCH SYMPOSIUM

The Tenth Joint Army-Navy Aviation Medical Research Symposium will be held at the Naval Aerospace Medical Research Laboratory on 20-21 July 1971.

Joint studies are being conducted at the Army Aeromedical Research Laboratory at Fort Rucker, Ala., and at the Pensacola laboratory, in the interest of flight crews.

Research investigators from Fort Rucker and Pensacola will present progress reports on their work for their mutual benefit and that of attendees from the headquarters of the Army and Navy in Washington and the Federal Aviation Administration.

Titles of four of the projects jointly studied are, "Individual Differences in Reactions to Selective Sensory Stimuli Related to Orientation and Performance



in Flight;" "Investigation of Causes of Military Aircraft Accidents Involving Pilot Vertigo/Disorientation," "Anticipatory Physical Stress Threat," and "Aircraft Impact Injury Protection."

Participants are expected to number about 50. They will be welcomed by RADM Oscar Gray Jr., Commanding Officer, Naval Aerospace Medical Center. Hosting

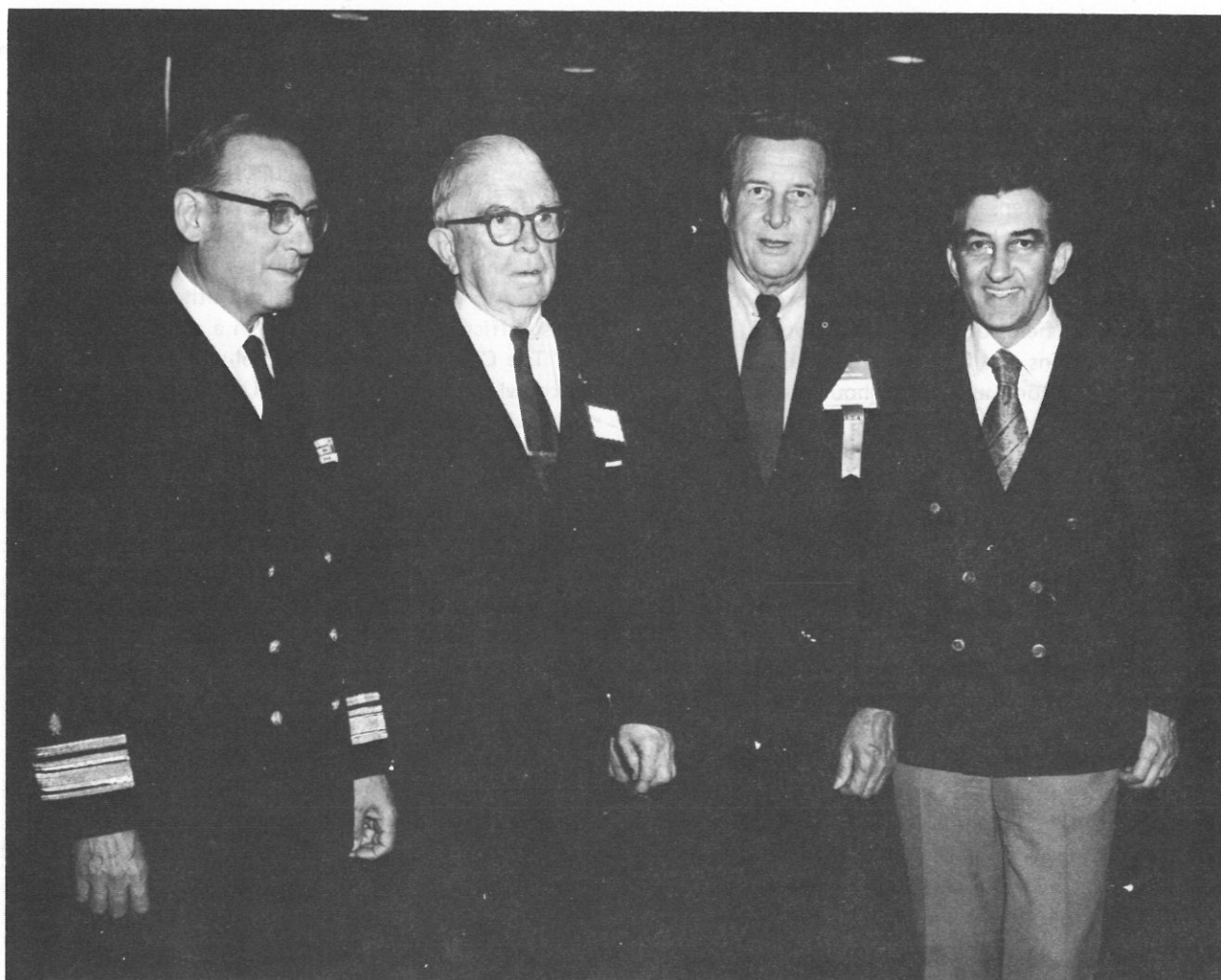
the visit is CAPT Newton W. Allebach, Officer-in-Charge, Naval Aerospace Medical Research Laboratory.

In addition to research discussions the agenda includes a banquet at the Mustin Beach Officers' Club and tours of laboratories during the visit of the military and civilian scientists.—PAO, Naval Aerospace Medical Center, Pensacola, Fla. 🇺🇸

#### NAVAL RESERVE DENTAL COMPANY 5-8



On 20 April 1971, at the Shoreham Hotel in Washington, D.C., in conjunction with the Annual Spring Postgraduate Meeting of the District of Columbia Dental Society, Naval Reserve Dental Company 5-8 of Georgetown University celebrated their 20th Anniversary. RADM Edward C. Raffetto, DC, USN, (left), Assistant Chief of the Bureau of Medicine and Surgery (Dentistry), and Chief, Dental Division presented a commemorative plaque for outstanding service to CAPT Albert G. Paulsen, DC, USNR-R, Commanding Officer (center) and CAPT Anthony P. Culotta, DC, USNR-R (right), Executive Officer, Naval Reserve Dental Company 5-8.



Attending the Annual Spring Postgraduate Meeting of the District of Columbia Dental Society are, from left to right: RADM E. C. Raffetto, DC, USN, Assistant Chief of the Bureau (Dentistry) and Chief, Dental Division; RADM A. W. Chandler, DC, USN (Ret); Dr. C.A. Laughlin, President-Elect of the American Dental Association, and; Dr. A. G. Chavoor, Past President of the District of Columbia Dental Society. 🇺🇸

#### CURRENT CONCEPTS IN MEDICINE COURSE

On 15, 16, and 17 Sept 1971 the third annual "Current Concepts in Medicine" course will be held at the Naval Hospital, NNMC, Bethesda, Md. The course has been expanded to three days and will include a dinner session on 16 Sept 1971. Topics to be covered include anticoagulant interactions with other drugs, slow virus diseases of the central nervous system, cardiac conduction pathways and heart block, indications for pacemakers in myocardial infarction, a panel on coronary artery surgery, a panel on hormonal aspects of cancer, a movie on hepatitis in drug users, red cell enzymes and hemolysis, HAIR, and many others.

☐ The course is open without fee to all military

physicians and to civilian physicians in the Washington area. Application forms will be mailed to all naval hospitals in July, or may be requested from the Course Director, CAPT L. M. Fox, MC, USN, Chief of Medicine, Naval Hospital, Bethesda, Maryland 20014. 🇺🇸

#### CONFERENCE ON NONDESTRUCTIVE TESTING

Your attention is invited to the Twentieth Defense Conference on Nondestructive Testing (NDT). The Conference will be composed of scientists, engineers, management and technical personnel who have the responsibility for the development or application of non-destructive testing or inspection methods in research and development, engineering, or quality assurance

work. The Conference will be hosted by the Naval Air Rework Facility, Naval Air Station Jacksonville and will be held 10-12 November 1971 in Jacksonville, Fla.

The primary purposes of the Conference are to develop potential solutions to testing and inspection problems and to disseminate information, within the Department of Defense on nondestructive testing. Potential advantages to be gained from Conference participation include:

a. Presentation of your activity's problem to experts in various fields of NDT drawn from all of DOD. Potential solutions and facilities are offered during the Conference and continued throughout the year.

b. Dissemination of state-of-the-art knowledge by selected papers and personal interchange on new methods or techniques.

c. Identification of potential duplication of NDT studies within DOD.

d. Establishment of personal professional contacts with recognized NDT experts who can be called upon when problems arise in the future.

Your contribution to the Conference can take the form of a testing or inspection problem or a technical paper on NDT work at your facility or under contract to your facility. The Steering Committee requests you to consider the presentation of a problem or technical paper, or both, at the 20th Conference. It must be pointed out that all presentations must be made by military or Civil Service personnel of the U.S. Department of Defense, since attendance at the Conference is restricted.

If you have an inspection or testing problem for presentation, please submit an abstract for evaluation and review by the Steering Committee no later than 25 June 1971 to:

SAAMA/MMEW-4

Attn: Mr. B. W. Boisvert

Kelly AFB, Texas 78241. (We regret that this notice was not received for publication until 27 May 1971, after the June issue had gone to press.)

The Steering Committee plans on meeting in mid-July and all submitters will be contacted soon after that date with additional details. Additional details on the Conference including an invitation to attend are scheduled for a later date. ☛

## COMBAT DUTY DOCUMENTATION

BUPERSNOTE 1611 of 1 March 1971 promulgates procedures for recording in the official record, an officer's performance of duty in a combat area. The following excerpts are published for the information of all interested officers.

"In order that appropriate recognition may be afforded to this type of duty (Combat Duty), it has been determined that any officer who qualifies for hostile fire pay, shall also have a special entry in his fitness report for the period involved. In addition, those officers who have received hostile fire pay prior to the date of this notice may insure that such combat service is reflected in their official record by submitting an affidavit. These entries in the record will readily identify to promotion boards and other record users those officers who have served in a combat area.

"The Chief of Naval Personnel will accept without acknowledgment, and file in an officer's record, his affidavit concerning receipt of hostile fire pay. The officer should state his full name, Navy personnel identification (file/social security) number, dates and places where hostile fire pay was received and the duty station to which assigned at the time. The affidavit shall be executed before an officer authorized to administer oaths and forwarded direct to the Chief of Naval Personnel (Pers-E221)."—Code 3B, BUMED. ☛

## NMRI EDUCATION RESEARCH

The primary purpose of the Education and Training Sciences Department is to conduct research and development which contribute to meeting the education and training requirements of the Navy Medical Department. The major in-house efforts during the past year have been focused on the subproject which is designed to modernize basic and continued training programs for Hospital Corps personnel by application of recent education and training concepts and technologies.

The work unit, "Comparison of Two Curricula for Training Basic Hospital Corps School Students" was completed and a second, "Feasibility Testing of Programmed Learning Packages for Teaching Pharmacology and Patient Care," was initiated. In the completed work unit, a new broad-field organized course, Pharmacology and Patient Care (PPC), was developed from behavioral objectives derived from a drug survey and an analysis of the tasks related to preparation and administration of medications. Through a comparative experiment, the cost/effectiveness of the new course was compared with that of the present subject-centered curriculum for training Hospital Corps School students to administer medications accurately in naval medical facilities. The new course, which required 81 instructional hours for presentation, replaced two courses, "Medical Mathematics" and "Materia Medica and Toxicology," and one unit of a third, "Principles and Techniques of Patient Care," which required a total of 126



instructional hours. Eight companies, of approximately 70 students each, participated in the comparative experiment, with four companies serving as experimental and four as control. Criterion tests and performance rating scales were used to evaluate the effectiveness of student learning. Experimental group students were found to achieve scores on each of the five criterion tests which were statistically significantly higher than those achieved by control group students. Students in the control companies achieved significantly higher scores than students in experimental companies on the subcutaneous injection procedure rating scale; however, there was no significant difference in the scores of the two groups for the intramuscular injection procedure. Feedback data collected on students in their first duty assignment substantiated the increased effectiveness of learning achieved through the use of the new curriculum.

Cost benefits of the new course were measured in terms of training time differences translated into money and man years. The saving of 45 hours of instructional time represents a potential monetary saving of \$140.40 per student. Applied to a 10,000 student Hospital Corps School input such as that in fiscal year 1970, an annual saving of \$1,404,000 and 216.35 man years could result. This number of man years is almost equivalent to the number of corpsmen used to staff the nursing service in a large naval hospital.

Data collection has been completed on the disenrollment study for the Hospital Corps School at Great Lakes and a computer program has been prepared and will be tested for application during the summer. It is hypothesized that the use of the computer program to predict potential disenrollees will decrease the "drop-out" rate from approximately 15% to around 4%.

Contractual efforts being directed toward application of a systems approach to the Navy Medical Department education and training program have resulted in the development of 16 prototype computerized task inventories for Hospital Corps personnel and one for Nurse Corps officers. Inventories will be developed for all Medical Department personnel and will be validated during the next six months. These inventories will be used as the basis for the development of future training programs. Also, they will provide information for developing career pathways, determining manpower requirement, and personnel assignments.—Naval Medical Research Institute (NMRI) Notes, No. 5. 🍀

#### DENTAL DISEASE CONTROL CONFERENCE

VADM G.M. Davis, MC, USN, Surgeon General of the Navy, has called upon the Naval Dental Corps to take the lead in making prevention of dental disease a function of total health care. Admiral Davis addressed



RADM E.C. Raffetto, DC, USN, Chief of the Naval Dental Corps (seated) and CAPT A.K. Kaires, DC, USN, Head, Professional Branch, Bureau of Medicine and Surgery, Dental Division, review directives implementing the Navy Plaque Control Program.

the Dental Disease Control Conference held May 26-28 at the Naval Dental School, National Naval Medical Center, Bethesda, Md., attended by senior officers of the Naval Dental Corps. The Surgeon General said the Navy is charged with development of health care systems. The term "health care" includes prevention and control as well as diagnosis and treatment. He urged stress on the concept of disease control based on knowledge of the cause of disease.

The objective of the Conference was to discuss the etiology and control of dental plaque infections — caries and periodontal disease — and in particular, to brief heads of dental clinics and other administrators on implementation of the new Navy-wide Plaque Control Program. Conference speakers discussed the microbiology of plaque and theories concerning the etiology of dental disease. They described how plaque can be detected and removed — by the individual caring for his own mouth, as well as by the dentist or dental auxiliaries. One important aspect of the Navy's Plaque Control Program is that patients will be required to achieve plaque control in their mouths before they receive treatment for all the damage resulting from previous dental disease. Conferees practiced plaque

detection and removal on each other, and were shown how the phase contrast microscope can be used to dramatize the presence of live microorganisms in plaque. The demonstration was conducted at the Preventive Dentistry Department of the Naval Dental School. Conferencees were briefed on the plaque control programs currently being conducted at the Naval Dental School, the Naval Training Center, Orlando, Fla., and the Plaque Control Center, U.S. Naval Academy, Annapolis, Md. The dental officers were instructed on how to conduct the Navy Periodontal Screening Examination, which is part of the overall program for disease control. Disease control in the Navy is also aided by the stannous fluoride program, which was established several years ago.

RADM E.C. Raffetto, DC, USN, Chief of the Dental Division, Bureau of Medicine and Surgery, in his

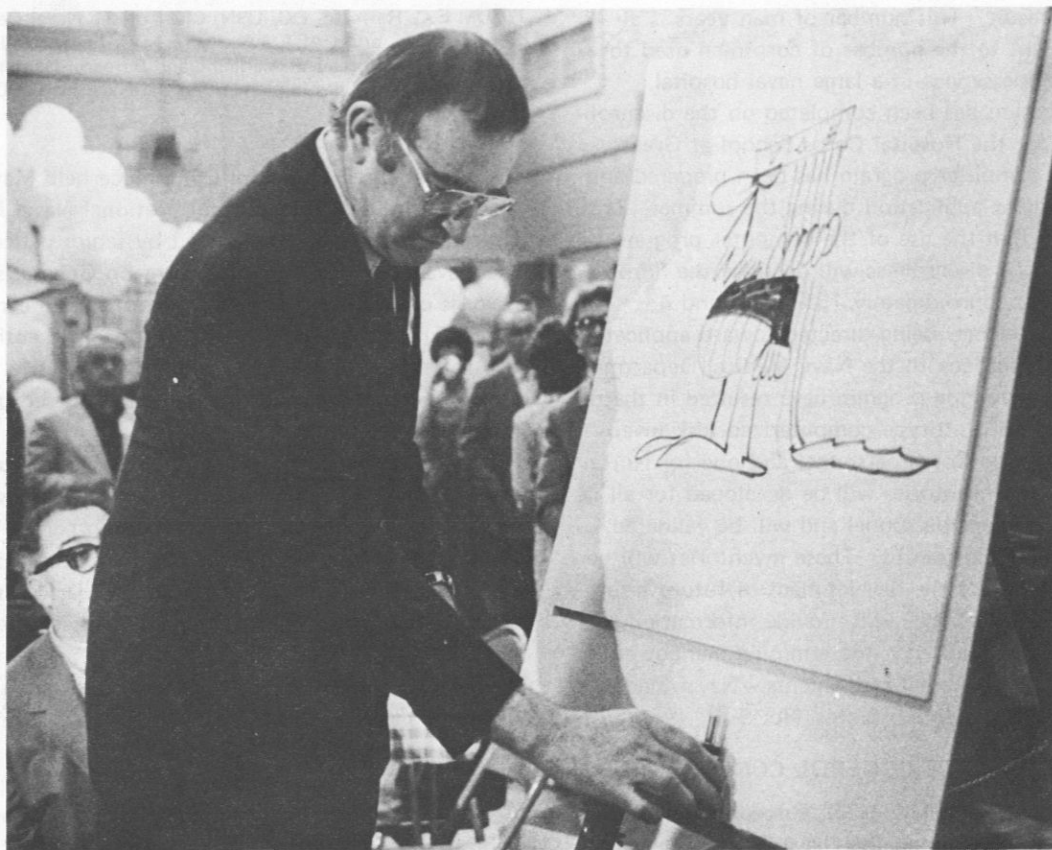
remarks to the Conference, emphasized that dental disease itself, rather than the results of disease must be faced. He urged participants to use their knowledge and imagination to establish and practice the concepts of prevention. Dental personnel must work WITH not ON patients, because patients are the ultimate controllers of dental disease.

RADM Raffetto was a recent recipient of a Citation of Merit presented by the Boston University School of Graduate Dentistry on 13 May 1971. Presented by the University Faculty and students as a tribute to Admiral Raffetto, a "dedicated scientist and administrator," the citation reads: "For notable achievements in the prevention and control of dental caries and periodontal disease, thus effectively improving oral health in the United States Navy and the Nation." 🇺🇸

#### VIP'S ENTERTAIN V.I.P.'S

Patients from military hospitals in the Washington, D.C. area were the V.I.P.'s (Very Important Patients) at a "Time-Out Cafe" held at the National Naval Medical Center in Bethesda, Md.

The V.I.P. Cafe was held to show the wounded veterans that somebody cared, and to say thanks for their sacrifices to their country. An impressive list of celebrities, both military and civilian, were on hand to talk with the patients.



Brant Parker and his scowling King of "Id" get together to arouse laughter in patients of military hospitals in the Washington, D.C. area at a V.I.P. (Very Important Patients) "Time-Out Cafe" held at the National Naval Medical Center in Bethesda.

Rep. F. Edward Hebert (D-La.) and Rep. L.C. Arends (R-III.) were Honorary Co-Chairmen for the cafe. Track star Jesse Owens and football hero Johnny Unitas were regular co-chairmen and Miss Carmella LaSpada was the coordinator.

ADM Thomas Moorer, Chairman of the Joint Chiefs of Staff; ADM Elmo Zumwalt, Chief of Naval Operations; and VADM George Davis, Surgeon General of the Navy, were among the distinguished military guests.

Sports and media celebrities were also on hand to entertain the patients. Sam Jones and Arnold "Red"

Auerbach, from the Basketball Hall of Fame, were there, as well as Gustavo Avila, who rode Canonero II to victory in the Preakness at Pimlico on May 15th. Washington Redskins Vince Promuto and Ray Schoenke were busy signing autographs, too. Other sports professionals present represented the horseracing, auto racing, tennis, golf and bowling fields.

Popular cartoonists, such as Jim Berry, Brant Parker, and Mell Lazarus demonstrated their illustrative talents for the patients. Special guest, Art Buchwald, hosted the "Time-Out Cafe," keeping the patients well amused. —PAO, NNMCM, Bethesda, Md. 🍀

## DENTAL SEMINAR



At the R.I. State Dental Society's professional seminar held at Quonset Point, R.I., CAPT George A. Pfaffmann (left), NAS dental officer, and CAPT Ralph W. Frame, NAS commanding officer, chat with Dr. Gerald S. Wank (third from left), Associate Professor at the New York University College of Dentistry, and Dr. Hubert A. McGuire, Past President of the R.I. Society and recent Past President of the American Dental Association. 🍀



## COLOMBIAN NAVY OFFICER CITED

CAPT R.D. Nauman, MC, USN, the Commanding Officer of Naval Hospital Memphis, Millington, Tenn., recently commended CCSM Jaime FANDINO Franky, LCDR, Colombian Navy, upon the completion of a Health Care Administration Observership. During the 17-week period, LCDR Fandino astutely observed the operations of the naval hospital. In a letter from CAPT

Nauman, the Colombian officer's attitude, demeanor, stature and professional acuteness were cited. "This reciprocity that emanated from our association with you shall always be remembered and treasured. We can only hope that we have been as successful in complimenting and contributing to your repertoire of knowledge as you have to ours," the written commendation noted.



RADM D.P. Osborne, MC, USN, (left), Inspector General, Medical, (Code 12), BUMED, was on hand for the presentation at the Naval Hospital Memphis and is pictured with LCDR Fandino (right) at the presentation. 🇺🇸

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# I N D E X

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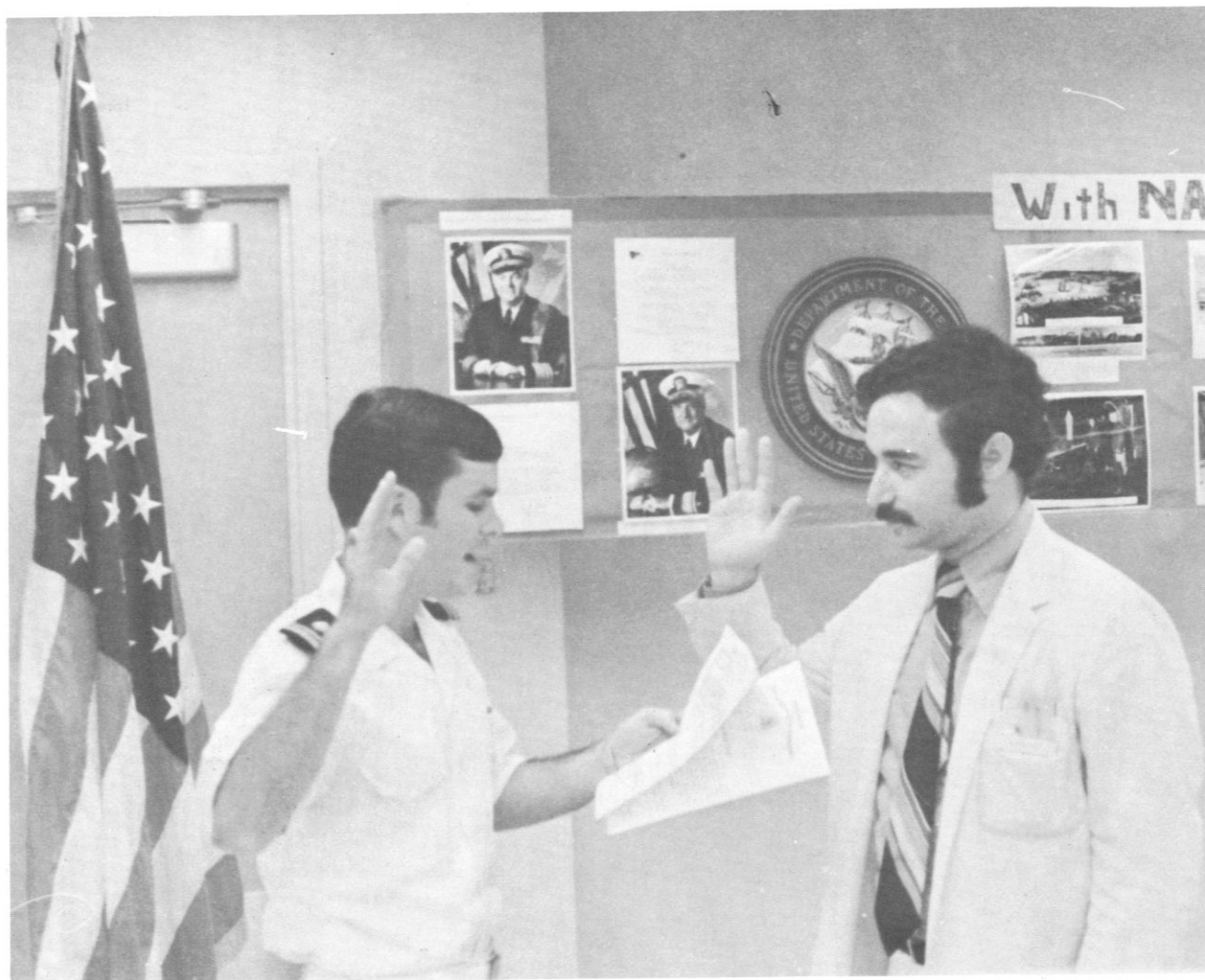
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